

MAY 28, 1941

Single Copy—20 Cents. \$4.00 Per Year
Vol. 33, No. 4, Serial No. 636. Established 1926

Written to be Read on Arrival

Member Audit Bureau of Circulations
Member Associated Business PapersAir Conditioning &
REFRIGERATION

NEWS

Entered as second-class matter Aug. 1, 1927. Trade Mark Registered U. S. Patent Office. Copyright, 1941, by Business News Publishing Co.

Goodyear May
Put Appliances
In Retail StoresWould Be the Second
Auto Accessory
Firm In Field

AKRON, Ohio—The Goodyear Tire & Rubber Co. here is reported to be planning to include a line of major and small appliances and sporting goods in its controlled dealer outlets.

The new merchandising setup will not be officially announced for some time, it is said, but the report indicates that the plans for the move are now taking form.

If Goodyear does begin to sell major appliances through its dealers it will be the second automobile supply firm to make the move this year, Firestone Tire & Rubber Co. having recently added a line of refrigerators to the products sold through its retail outlets.

The lowered price range in major appliances is said to have been a prime factor in getting Firestone and Goodyear interested in the field.

Commercial Cabinet
Maker Substitutes
For Stainless Steel

GRAND HAVEN, Mich.—How one manufacturer of commercial refrigerators is proposing to substitute for stainless steel, on which government restrictions for defense use have been placed, is described in a bulletin just issued by Puffer-Hubard Mfg. Co. here.

The changes on specifications outlined below are in effect on products just released for production, and will be ready for delivery June 15.

Beverage Coolers: The beverage cooler doors will be constructed of heavy steel, finished in black acid-resisting porcelain. The edges, which are subject to wear, will be protected by stainless steel. Rails and mullions will be continued to be made of stainless steel as long as the stock lasts, or as long as it is possible to obtain supplies of stainless steel.

Display Cases: The storage door sills on double-duty cases, formerly constructed of stainless steel, will be changed to black porcelain finished steel.

Connor Corp. Buys
Plandaire Assets

NEW YORK CITY—Assets of Plandaire, Inc. of Pittsburgh, have been purchased by the W. B. Connor Engineering Corp. here. The Plandaire business in ceiling type air diffusers will be merged with the Dorex Division of the W. B. Connor Co.

Plandaire ceiling diffusers, which regulate the flow and velocity of air from supply ducts will complement the Dorex line, which is also marketed in connection with air conditioning systems. All trade names owned by Plandaire will be continued.

Toronto Chosen As Site
Of 1941 Dairy Show

NEW YORK CITY—This year's Dairy Industries Exposition will be held in Toronto, Canada, from Oct. 20 to 25 inclusive. The show is sponsored by the Dairy Industries Supply Association.

Atlanta, Knoxville
Ration Power Use
To Aid Defense

ATLANTA—Electric power conservation measures designed to divert needed energy to defense industries have been put into effect in Atlanta and Knoxville, Tenn. Ornamental white way lighting was cut off in Atlanta this week and many large electrically lighted advertising signs will be darkened.

It is possible that many show windows will be "blacked out" under the power conservation program.

The energy needs of aluminum plants at Badin, N. C., and Alcoa, Tenn., producing nearly half of the nation's aluminum, prompted an appeal by government agencies to southeastern users of power to curtail their non-prime uses of current.

"The defense demand for power seems to be just starting," said J. A. Krug, TVA's chief power engineer, "with indications that it will not level off but continue on the uphill for the next year, or 18 months. This will require the public to budget its domestic needs."

Alco Valve Adds
To Its Plant

ST. LOUIS—Extensive alterations and additions to the factory of Alco Valve Co. are now nearing completion and the new facilities will be in use before June 1, reports A. B. Schellenberg, president. Present addition is the third made by Alco since the original building was acquired in 1934.

The completed building is of modern one-story brick construction and includes such features as linoleum floors, structural glass brick, fluorescent lighting and air conditioning. Adjoining property has been acquired for future expansion.

Production facilities have been increased 50%, but two labor shifts will still be required to take care of increased business, the company has announced. Improved straight line production routing is effected with the additional floor space, and indicated.

(Concluded on Page 4, Column 1)

Ala. Hardware Men Rap
REA 'Wholesale' Plan

MONTGOMERY, Ala.—Resolution condemning the Rural Electrical Administration's plan to supply its members with electrical appliances at wholesale prices was passed by the Retail Hardware Association of Alabama at its annual convention here recently.

The resolution read: "Be it resolved that this association protests the policy established by the Rural Electrification department of the Department of Agriculture which presumes that members of rural electrification projects should purchase appliances at from 20 to 30% less than other consumers pay, and which encourages these rural customers to eliminate the retailer and to make such purchases from wholesalers and manufacturers."

Refrigerator Tax Jumps
\$700,000 During April

WASHINGTON, D. C.—Excise tax collections on mechanical refrigerators increased some \$700,000 in April over the corresponding month of 1940, according to statistics compiled by the Bureau of Internal Revenue, U. S. Treasury Department. Collections totaled \$1,645,045.13 this year, compared to \$874,213.16 in April of 1940.

'You Can't Eat Your Cake'
They Say In WashingtonThe Editor Interviews: President Roosevelt
Wm. Knudsen... Lord Halifax... Sidney Hillman
John Maynard Keynes... Sullivan... Stettinius
Meyer... Wilson... Lubin... Batt... Bureaucrats

By George F. Taubeneck

WASHINGTON, D. C.—"You can't eat your cake and have it, too." That's the message which everybody from President Roosevelt and OPM Directors Knudsen and Hillman down to the tough-cookie bureaucrats told us to take back to business paper readers.

In other words, if we're going to establish democracy all over the world, we must give up everything—including our jobs and our businesses—in order that the war machine may go into high gear. "Business as usual" is not only out; it's 'way behind. Now they're saying: "Forget about business until after the war; our only business is to win the war."

Business as usual has gone. Living as usual must be greatly modified. "C'est la guerre."

As for the air conditioning and refrigeration industry, it's in for sharp constriction unless manufacturers get set with substitutes for metals. The NEWS has been sounding this warning for the last six months; but now it becomes necessary to shout the warning. Priorities will be much stiffer in months to come. The entire field of metals is now under control. In fact, the next few months will bring:

Acute hardship and difficulties for all civilian metal users. Despite all the assurances you may have received to the contrary, priorities are imminent on:

Copper Steel Tin Rubber Cork Fluorine

Electric refrigerators have been made out of wood before, and so have washing machines. Maybe they will have to be again.

Electric ranges and radios appear to be in line for knockout blows—they both simply must have nickel (ranges need it for heating element alloys, radios for tubes). And nickel appears to be unobtainable "for the duration." Our current needs, defense and non-defense, are 21 million pounds of nickel monthly. All we are getting are 6,500,000 pounds monthly. So that's that.

Aluminum appears to be out for the duration, despite vastly increased capacity. Reason: Planes are getting bigger and bigger, and there are to be more and more of them. Copper is plentiful in Chile, but we may not have the ships to bring it here. (Copper is also plentiful in Michigan, where "high cost" mines are idle; but nobody in Washington seems to hear Senator Vandenberg when he points that out.)

Ship shortage will check tin and rubber imports, too. Synthetic rubber capacity could be enormously increased in a few months, but the Administration seems to prefer rationing rubber, to protect Britain's rubber interests after the war.

Steel? There ought to be plenty, if steel makers can be persuaded to increase their capacity. Eventually they will be forced to do so; but in the meantime, hardships may be suffered by manufacturers of non-defense items.

Who Told Us

New subscribers to AIR CONDITIONING & REFRIGERATION NEWS may wonder how we get this way. The answer is that for several years the Editor has been making frequent trips to Washington with a committee of representative business paper editors, getting group interviews of the "don't quote me" variety.

(Concluded on Page 4, Column 2)

510,000-Unit
April Topples
All-Time MarkHousehold Shipments In
4-Month Period Pass
1,700,000-Mark

DETROIT—Breaking all existing sales records for the second consecutive month, world shipments of household electric refrigerators during April totaled approximately 510,000 units, to bring the figure for the first four months of this year to approximately 1,712,000 units, according to estimates by AIR CONDITIONING & REFRIGERATION NEWS.

The April all-industry total of 510,000 units exceeds by 56,000 the previous all-time monthly high, 454,000, established only the preceding month. For the first four months of this year, shipments of household refrigerators were more than double the 836,000 units reported in the corresponding period of 1940, the industry's record year up to now.

Previous record April was in 1937, (Concluded on Page 16, Column 3)

Norge 1942 Ranges
Have 6-Heat Units

DETROIT—Six-speed switches and a number of other advanced convenience features mark the eight-model line of electric ranges which comprise Norge's 1942 series, just introduced to distributors and dealers.

Top is of one-piece, seamless construction, with sloping backrail, and exterior is of heavy-gauge metal, finished in white porcelain enamel.

(Concluded on Page 16, Column 1)

N. Y. Dealers Report
First Sales Letdown;
Deliveries Get Spotty

NEW YORK CITY—Second week in May found the first letdown in retail sales gains of major appliances in the New York metropolitan area since the first of the year, reports the "New York Times."

According to the "Times," there is no specific explanation for the slump other than the fact that the volume this year has been phenomenally good, with individual stores reporting gains up to 75% over the same period last year.

The "Times" also declares that deliveries on refrigerators and washers are becoming spottier, more because manufacturers misjudged the demand for certain models rather than because of material shortages. One distributor informed dealers last week that no further deliveries of a popular 6-foot refrigerator model could be made before June 15.

Knoxville Sales, Average
Price Up In April

KNOXVILLE, Tenn.—Household refrigerator sales by Knoxville dealers during April totaled 829 units at an average retail price of \$147, a decided gain over the 601 units sold at an average of \$143 during April, 1940, according to reports made to the city's Electric Power & Water Board.

Commercial appliance sales reported for the month showed 11 (Concluded on Page 4, Column 4)

ACRMA Head Examines Carrier Seal Model



This cut-away operating model of the seal used on the Carrier centrifugal compressor is being demonstrated by E. T. Murphy, Carrier vice president, who was recently elected president of the Air Conditioning & Refrigerating Machinery Association. Effectiveness of the "seal with oil" method around the drive shaft is shown in the model through use of a small hand oil pump.

S-W Celebrates Year Of Defense Work

CHICAGO — To mark the first anniversary of its shipping defense materials to the ordnance department Stewart-Warner Corp. entertained Col. Donald Armstrong, executive officer of the Chicago ordnance district, at a luncheon May 23.

In a report to Col. Armstrong, James S. Knowlson, president and board chairman, said that Stewart-Warner had completed 3,000,000 artillery fuses in the past year. Despite the increase of its government business from 2% to more than 14%, the company has actually increased its production of consumer goods, Mr. Knowlson averred.

Besides fuses S-W is producing other defense materials such as airplane heaters, practice bombs, parts for airplane motors, tank ammunition racks, stirrup pumps for fighting incendiary bombs, parts for field ranges, and water filters.

Defense Activities Will Last 5 Years, Reed Warns Non-Defense Industries

'Permanent' Substitutes Must Be Found, He Says

NEW YORK CITY—Industries not engaged in defense activities must plan for "a period not of months but of years" to get along with much less than their requirements for a long list of strategic materials, Philip D. Reed, chairman of the board of the General Electric Co., declared at the twenty-fifth annual meeting here last week of the National Industrial Conference Board.

Mr. Reed, who for three months has been Senior Consultant to the Director of Priorities of the Office of Production Management (OPM) in Washington, said he was expressing "a few personal observations on several points that must be considered in charting the course of any business."

WE MUST ADJUST

Prime emphasis will be placed on military products for five or more years, Mr. Reed said, adding that "the sooner we accept the fact, for purposes of planning, that we face a long period of enormous production for defense, with a consequent shortage, rationing, and allocation of strategic materials, the more quickly will non-defense industries adjust themselves to the new conditions and undertake the great task of maintaining maximum production for civilian needs without interference with defense output."

"From every standpoint—social, economic, and political—we must put and keep all of America at work," said the G-E board chairman. He suggested "the redesigning of peacetime products wherever possible, and where impossible the preparation for defense manufacture" to prevent shutdowns and unemployment.

He made the prediction that engineers, chemists, and designers will develop new products to help absorb the increased purchasing power, allay inflationary pressures, support our standard of living, and keep the country at work. One of the benefits of a larger national income, he said, would be an increased ability to pay for a large part of the defense program as we go.

Thirty-two field offices of the OPM, he stated, are prepared to help in the selection of defense products suitable for manufacture in various kinds of plants.

The post-war decade will resemble neither the 1920's nor the 1930's, said Mr. Reed, and "I suspect that the war will advance by several decades the twentieth century trend away from laissez-faire and toward economic integration and industry-wide planning under government supervision."

He summed up the following probable future trends:

A mature, consolidated, national labor organization, led by able and understanding men, who will negotiate all questions pertaining to wages, hours, and conditions of work, with business leaders acting in concert through associations of employers on an industry basis.

A continuation of the trend toward centralized control of money and credit.

GOVERNMENT SPENDING

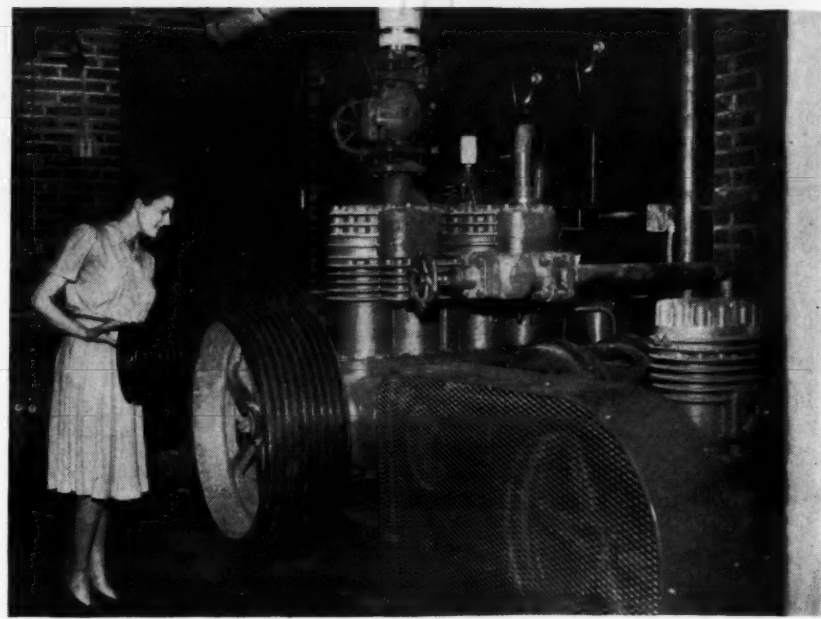
Large and gradually declining government spending for previously planned and generally desirable public projects, for several years after the war, in order to cushion the devastating effect of an almost vertically declining demand for armaments.

Great emphasis placed on production and a deep determination to take whatever steps are necessary, however drastic, to avoid a recurrence of mass unemployment. To this end we may expect to see the government gradually relinquishing its ownership of defense plant facilities on terms and conditions that will provide the purchaser with a strong incentive to maintain production and employment.

Subject to these changes, a sincere attempt to preserve the elements and incentives of the enterprise system.

Whether under these conditions, and with profit margins generally lower than in the past, there will be enough confidence to create a broad flow of private savings into new and existing enterprises will be the factor that determines whether more drastic experiments in government borrowing and spending will be resorted to.

Air Conditioning (& Machinery) Popular



This young lady is interested in the refrigerating machines used to power the 80-ton air conditioning system which keeps the Ohringer furniture store at Braddock, Pa. comfortable and clean. The store reports that the system keeps furniture and rugs in fine condition, and that both patrons and employees benefit from perfect year-around temperature and relative humidity.

No Aluminum In 1942 Head of Washer Group Hits Increased Tax, 'Luxury' Label

WASHINGTON, D. C.—No aluminum whatsoever will be available for civilian requirements in 1942. This unequivocal statement—bad news for the appliance business, as well as for many others—was made by W. L. Batt, deputy director of the production division of the Office for Production Management, in the course of his testimony before the Senate committee investigating national defense.

He added that despite this curtailment, not enough aluminum would be available for even "indirect" military needs.

"Sometime in 1942," Mr. Batt stated, "we shall have just enough aluminum, if all the scrap on the market comes back, for aircraft and direct military needs, and none for civilian needs."

Explaining that the heavy bomber program recently announced by President Roosevelt put a new aspect on the aluminum problem, he reported that so far aircraft production had not been held up by lack of aluminum for "more than a week or two at a time."

Under the new program, he said, peak aircraft needs will be 900 million pounds of aluminum a year, and other military requirements will total 300 million pounds. The nation will be able to meet these requirements, he declared, if complete control can be achieved over 310 million pounds of secondary scrap metal and if about 110 million pounds can be obtained from Canada.

C-H Declares Dividend Of 40 Cents

MILWAUKEE — Cutler-Hammer, Inc. has declared a 40 cent dividend on common stock, payable June 14 to stockholders of record June 4. In the preceding quarter 35 cents was paid.

Haley & Ward Takes G-E

ONTARIO, Va. — Haley & Ward Motor Co. has been appointed General Electric dealer here.

CHICAGO — Vigorous protest against the increased tax on washing machines proposed in the forthcoming revenue act, and the classification of washers along with motorcycles, jewelry, and musical instruments as luxury items, has been made by W. Neil Gallagher, president of the American Washer & Ironer Manufacturers Association, in a telegram to Robert L. Doughton, who is chairman of the House Ways and Means Committee.

Stressing the labor-saving value of washing machines in relation to the labor needs of the defense effort, Mr. Gallagher points out that 16 million washers are now in use, which—assuming that each machine saves an average of two hours a week for housewives—means a weekly saving of 32 million hours, or four million eight-hour days, of woman power.

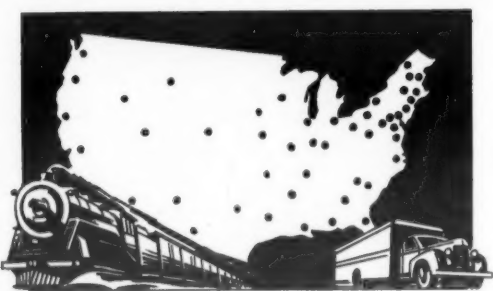
Text of Mr. Gallagher's wire follows:

"As a representative of the washer and ironer industry, may I protest the suggestion made by Leon Henderson before your committee that our products be socked in new revenue revision act of 1941. Mr. Henderson's statement indicates he has little knowledge of the service performed by washers and we object to being classified with luxury products, such as motorcycles, jewelry, and musical instruments."

"Surveys made in the past prove that washers are purchased as household necessities and the figures will show washer the most desired of all labor saving devices. A market analysis of more than two thousand owners of washing machines revealed that in excess of 60% had annual incomes of less than \$1,500. With a labor shortage seeming imminent in the next few months it appears more necessary than ever that the sale of our products be given encouragement so that families in low income brackets will not be penalized and will have more time available for defense duties."

"May we ask your committee to give consideration to these facts."

Nation-wide Distribution



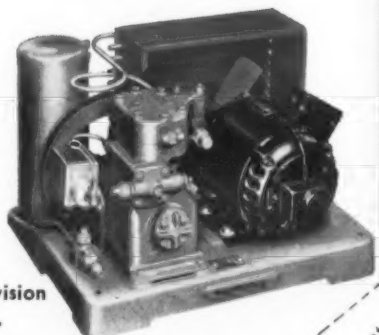
Another Reason for Using KELVINATOR PARTS AND SUPPLIES!

Count on Kelvinator when you need refrigeration parts and supplies IN A HURRY! A nation-wide system of strategically located warehouses makes possible prompt deliveries in any part of the country.

This is just one of the reasons why you'll be money ahead if you standardize on Kelvinator refrigeration parts and supplies.

Send now for our new 1941 Refrigeration Supplies Catalog. Use the coupon.

Kelvinator Commercial, Parts & Service Division
Nash-Kelvinator Corp., Detroit, Mich.



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Crosley Shipments So Far Lead Total For 1940

CINCINNATI—Shipments of Crosley refrigerators for the first four months of 1941, plus unfilled firm orders now on hand, amount to 111% of the company's total refrigerator volume for the entire year of 1940, reports R. I. Petrie, vice president and general sales manager of Crosley Corp.

A new high record for refrigerator shipments was established during the first four months of 1941, in which 107% more refrigerators were shipped than during the same period last year. This passes the previous record increase of 102% made during January and February.

BUSH LEADS the way to COOL PROFITS

For low ceiling market coolers where space is small and high capacity of refrigeration is required.



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610 N. OAKLEY BLVD.
CHICAGO

Bush
Mfg. Co.

COMMERCIAL COOLING UNITS by

The Frozen Food Industry Prefers Frick-Freezing Systems

It's a fact that more foods are now being frozen with Frick-Freezing Systems than by any other method. Why? Because these Frick Systems handle ANY food, in season; they assure the rapid cooling and high relative humidity essential to quality; they save time, labor, and up to 1/3 in power cost.

Bulletin 147, describing Frick-Freezing Systems, is of interest to packers, canners, markets, ice and cold storage plants, locker plants, and the growers of fruits, vegetables, poultry and livestock. Just off the press; your copy is waiting; write.

FRICK CO., Waynesboro, Penna.

10 Tips To Credit Men:

N.Y. Instalment Sellers Told How To Give Time-Pay Customers A Break

NEW YORK CITY—Ten easy ways in which retailers can make their time payment contract practices conform with newly enacted legislation scheduled to become effective next January were outlined by H. J. Kenner, general manager of New York City's Better Business Bureau, to a group of 500 credit and collection managers at a meeting sponsored here recently by the Retailers Credit Bureau of Associated Furniture Dealers of New York City.

Explaining that "concurrent with the application of the new legislation, instalment sellers will act voluntarily to raise the level of their practices wherever necessary," Mr. Kenner drew the following recommendations from the report which his sub-committee on Content of Contracts and Complaints had presented to the New York Conference on Instalment Selling:

"1. The contract should be as brief and as simple in its terms as may be consistent with sound legal practice.

BANISH FINE PRINT

"2. No contract should be printed in less than 10 point type. Type of 8 point size is the minimum required by law.

"3. Each legal instrument used should be a separate one, identified for what it is, in conspicuous display type, at the top and at the place for signature, namely: This is a Conditional Sales Contract. This is a Chattel Mortgage. This is an Assignment of Wages. This is a Continuing Guarantee.

"4. The purchaser should be asked to read the contract carefully before signing and the following admonitions should be printed in display type on the contract: Read contents

carefully, then sign. Do not sign this contract in blank. Keep your copy of this contract.

"5. Every customer should be given a copy of the contract, when he signs it, which adequately describes the merchandise bought. Details such as serial numbers, however, may be filled in later.

LIST ALL CHARGES

"6. The contract should clearly state the cash price of the merchandise purchased, the amount of the carrying charge, the periods of payment, and the amount of each instalment. It also should clearly state the amount of any other charges, such as for insurance or extra service, and should state the amount of the trade-in allowance, if any.

"7. No contract should contain: (1) Waiver of repossession without demand or reasonable notice. (2) Waiver of sale after repossession without reasonable notice. (3) Waiver of damages against seller. (4) Provision that the seller's record is the only evidence of debt. (5) Confession of judgment, prior to actual default in payments.

"8. All complaints by purchasers should be given careful consideration and adjusted fairly. Causes of complaints should be carefully studied and corrected by the individual seller.

"9. Education of the purchaser as to his obligations and rights should be carried on continuously by printed brochure and by salesmen in the store.

"10. A customer should be given a statement of his account whenever he requests it. The law permits a nominal charge of 25 cents for such statement, after the first one within the period of a year."

G-E New York Branch Holds Open House

NEW YORK CITY — Four-day house warming party lasting from 1 p.m. to 11 p.m. daily was held at the General Electric Bldg., 570 Lexington Ave. here, April 22 through 25, with the appliance and merchandise department and metropolitan distributing branch as hosts.

Members of the branch on hand to greet guests included: Earle Poorman, manager; P. L. Griffin, operating manager; D. W. May, sales manager, radio and vacuum cleaners; A. E. Pierce, sales manager, heating and air conditioning; George F. Bart, advertising manager; Howard E. Johnson, accountant; George W. Kautz, credit manager; S. J. Hammer, order service, radio and vacuum cleaners; N. A. Smith, order service, heating and air conditioning; P. T. Given, service manager; and T. J. Falk, assistant service manager.

In addition, the following district sales representatives were present: A. J. Carmody and E. R. Harrington, heating and air conditioning; J. E. McCarthy, L. E. Pettit, and R. S. Leggett, heating devices; J. L. St. John, vacuum cleaners; A. S. Reed, refrigerators; R. A. Graves, home laundry; J. F. Galloway, clocks; and A. E. Dennis, kitchen equipment.

Crosley Products Hit the Trail



Crew of the Crosley Showmobile in which Connecticut Appliance Distributing Corp. carries Crosley products to prospective dealers in distant points line up in front of their sales-making "covered wagon."

Left to right, crew members are: Frank Wadhams, Crosley territory manager, Hartford district; John Dennis, service manager, Connecticut

Appliance Distributing Corp.; Harold Barrett, Crosley territory manager for southern Connecticut; A. R. Wentworth, Crosley territory manager for eastern Connecticut; Loyd Dopkins, district manager, Crosley Corp.; Richard Heimovitch, vice president, Connecticut Appliance Distributing Corp.; Henry Cummings, office manager, Connecticut Appliance Distributing Corp.

Philco Names Meggs

DALLAS, Tex.—Meggs Co., 2600 Main St., has been named dealer for Philco refrigerators.

Dominion Appointed

ARLINGTON, Va. — Dominion Electric Co. has been named Westinghouse dealer here.

500 Buffalo-Area Appliance Dealers & Salesmen Pack Annual 'Pep Meeting'

BUFFALO—More than 500 Buffalo area electrical appliance dealers and salesmen attended the annual Dealer and Salesman Jamboree of the Electrical Association of the Niagara Frontier in the main ballroom of Hotel Buffalo.

R. H. Davison, chairman of the refrigeration committee of the association and Kelvinator zone manager, was general chairman. He told the audience that this is a year of great opportunity which should result in increased business and earnings for every appliance dealer.

"The government is spending millions of dollars which is filtering down through into consumer channels," Mr. Davison said. "But we have to get in and pitch to sell our merchandise. We must arrest the attention of the buying public."

He then described the annual spring refrigerator-range show to be sponsored by the association in the Electric building here, and urged every dealer to put in an appearance at the exhibit.

R. W. Mitchell, president of the association, also spoke briefly.

SCHMIDT CITES PROGRESS

Walter S. Schmidt, chairman of the range committee of the association, reported that range and refrigeration sales in the Buffalo area this year are running substantially ahead of the corresponding 1940 period. He explained to dealers that the Buffalo Niagara Electric Corp., with whom he is identified, recently went out of the appliance merchandising field entirely and is looking to the dealers to take up the slack.

Pointing out that the electric range saturation in the Buffalo area is only 10%, he declared that dealers have an opportunity to do an outstanding job of range promotion this year. He said that the power company would support the dealers in every way possible and would turn over leads regularly to dealers.

Charles E. Swartzbaugh, president of the Swartzbaugh Mfg. Co. of Toledo and past president of the National Electrical Manufacturers Association, in the final address asserted that "the Army, Navy, and air force of the United States will see combat service in the Mediterranean of the Far East in less than a year."

SWARTZBAUGH PREDICTS

Mr. Swartzbaugh also stated that:

1—The "literary period of aid to the democracies is at an end and we are about to go to war."

2—There will be "less political management" of the defense program in the future.

3—Draft quotas soon will be increased.

4—"Radical labor disputes" will be better controlled.

5—Rationing of labor as well as raw materials is on the schedule books, as indicated by the automobile industry's voluntary proposal of a 20% cut in volume, thus releasing labor for defense purposes.

6—Wage rates will continue to rise "despite the fact that the cost of living is still 12 to 14% below the 1929 level."

7—There will be no inflation this year. No substantial increase in retail business is likely because "in all probability the government is going to siphon off private capital." Securities and real estate will continue to be depressed.

Mr. Swartzbaugh emphasized that the United States must guard against both its external and internal enemies. "This land of opportunity is worth defending," he asserted, "whether the threat to its future arises from the international racketeers or internally from the misguided machinations of social workers."

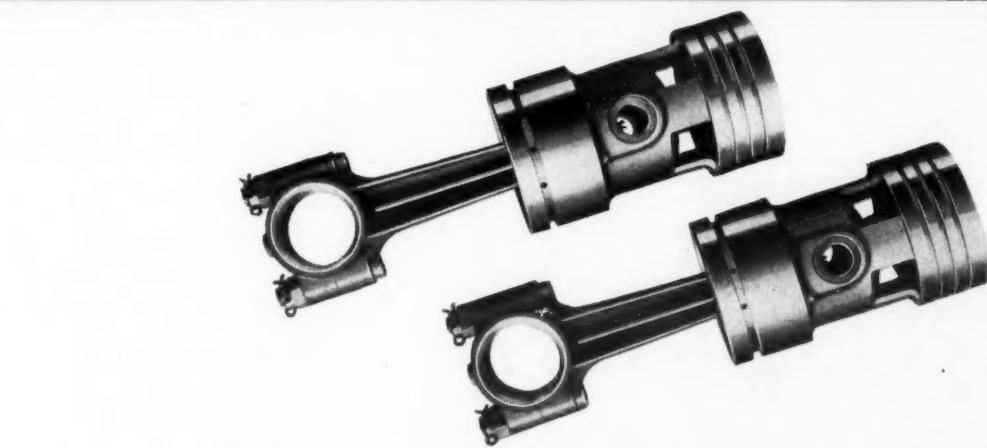
Samuel S. Vineberg, manager of the association, was in charge of arrangements.

Zabel-Martin Co. Moves

KENOSHA, Wis. — Zabel-Martin Co., appliance dealership, has moved from 5807 Sixth Ave. to 5826 Sixth Ave. Frank Zabel heads the firm.

Floyd & Son Adds G-E

FAIRMONT, N. C.—C. A. Floyd & Son, local furniture merchant, has been named General Electric dealer here.



AS IDENTICAL AS
INTERCHANGEABLE PARTS

● YOUR INTERESTS
● BAKER'S INTERESTS

BAKER Concentrates on Commercial and Industrial Air Conditioning and Refrigeration — EXCLUSIVELY!

If your primary interest is commercial and industrial refrigeration and air conditioning, you'll find there's a tremendous advantage in handling the BAKER line, because YOUR interests and BAKER's interests are identical.

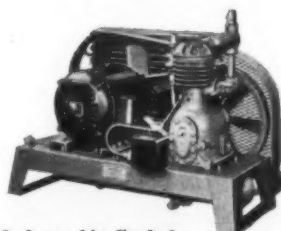
BAKER devotes its undivided attention to the manufacture of the finest possible equipment for the commercial and industrial field—has no conflicting interests in any other type of product. From design to delivery, the company's entire thinking and activity is in terms of these fields exclusively.

That is why BAKER equipment is designed specifically for the requirements of commercial and

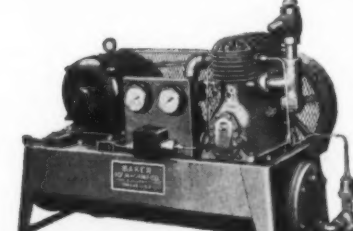
industrial users—built to stand the gaff of the most strenuous operation for years on end—built to provide the high efficiency so necessary for the quality performance and economy of operation demanded in these fields—built in a variety of sizes sufficient to fit the requirements of small or large jobs exactly, eliminating the necessity of overworking a unit that is too small or underworking a unit that is too large—built for the flexibility necessary to handle the most extreme variations in cooling load, yet keep operating costs at bed rock!

Think what such a concentration of interest and effort means to you in the way of product, promotion, and factory cooperation! Think what a reservoir of priceless experience, information, and ideas it provides for you to draw upon whenever you wish! Then act—TODAY—to secure the BAKER franchise in your territory. Write to the factory NOW for complete information.

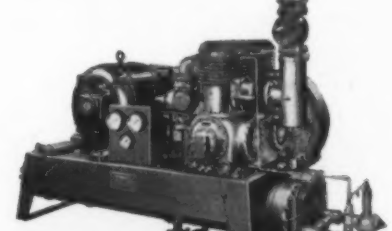
BAKER ICE MACHINE COMPANY, INC.
1506 EVANS ST.
OMAHA, NEBR.
Authority on Mechanical Cooling For 35 Years



2 h.p. Air-Cooled BAKER "Freon" Condensing Unit.



15 h.p. Water-Cooled BAKER "Freon" Condensing Unit.



60 h.p. Water-Cooled BAKER "Freon" Condensing Unit.

Alco Valve Adds To Plant and Builds New Laboratory

(Concluded from Page 1, Column 2)

vidual production lines are set up for small commercial valves, large air conditioning valves, and magnetic valves. A separate department will handle special orders so as not to disturb regular production lines.

Included in the new facilities is a complete new engineering laboratory. Three atmosphere and test rooms are provided in which it is possible to produce any temperatures or humidities that would be encountered from Death Valley to the North Pole, it is claimed.

The laboratory has its own steam plant, machine shop, transformers, motor generator sets, etc. Equipment includes portable thermocouple test stands, calibrated receivers, calorimeters, Rockwell gauges, flowmeters, and a wide range of compressor sizes for all refrigerants. The entire laboratory and drafting room can be used as a test room also, and is arranged so that any "comfort load" conditions can be produced the year around at will.

The completely air conditioned company offices are also being expanded as a part of the program.

A portion of the new factory space will be devoted to the defense program. Alco is now building refrigerant controls of special types for the Navy Department, and also makes precision controls for aircraft manufacturers.

They Say In Washington:

(Concluded from Page 1, Column 3)

These have been regularly reported in the NEWS, and our record of predictions of future events, based on these interviews, has been very high—unfortunately. This time we interviewed:

President Roosevelt . . . OPM's Knudsen, Hillman, Stettinius, Batt, and Blackwell Smith . . . John L. Sullivan, assistant secretary of the treasury in charge of taxes and tax revisions . . . Lord Halifax, British ambassador to the U. S., and Prof. John Maynard Keynes, chief economic advisor to Churchill and Roosevelt (incidentally, Keynes is the fellow who draws the blueprints for the New Deal) . . . Leon Henderson's smart young men in OPACS (Office of Price Administration and Civilian Supply) . . . Carroll Wilson, Director of the Bureau of Foreign and Domestic Commerce . . . Senator Truman and Representative Cooper . . . Eugene Meyer of the National Defense Mediation Board, and publisher of the "Washington Post" . . . Albert Hawkes, president of the Chamber of Commerce of the United States.

Civilian Supplies

OPACS, the Office of Price Administration and Civilian Supply, is the outfit that's going to run our lives from now on. Its "bright young men" are going to tell us what we can consume and what we are to pay for it, what we can't have, how much we can charge for our products and services, whether or not we can stay in business.

After hearing the "bright young men" talk, we concluded that OPACS really meant, "Oh, Pass Away, Civilian Supplies."

You hear them nonchalantly bandy around such ideas as gasolineless Sundays . . . bicycles instead of motor cars, same as in Europe . . . no more oil burners, because there won't be enough fuel oil, anyway . . . we can live on much less (they do in Europe) . . . tobacco is plentiful, and is a pleasure for the masses—if you can't get new refrigerators to preserve your food, you can smoke and chew more . . . instalment selling to be sharply curtailed, possibly eliminated . . . cash and carry—if there's anything to carry.

Strikes, Prices

The cost of living is to be stabilized. That means wages, prices, dividends are to be fixed. They have a time table on that, which runs somewhat as follows for 1941:

1st Quarter: High profits reports

2nd Quarter: Wage increases

3rd Quarter: Tax increases, to curtail and freeze profits

4th Quarter: Wages and prices frozen

In other words, strikes are to be countenanced "until the workers get theirs." Since business made more money last year, they reason, labor is entitled to more this year. But after the new tax laws and wage-and-price "freezing," nobody will have as much as he did before. Anyway, there'd be little to spend it on.

A longer work-week may be expected next year; but time-and-a-half for overtime and the 40-hour week will remain in force until millions more have been trained and hired.

Taxes

Taxes will be just as bad as you feared. Income tax exemptions will probably not be lowered; but surtaxes will begin with 11% of the first taxable dollar, and go up from there.

On corporation profits a 6% surtax seems likely; also a penalty tax against corporations retaining an "unreasonable" portion of their earnings. A general sales tax is being held in reserve, but surely won't be passed this year.

On 1941 business, they estimate a 2% sales tax would yield only 990 millions anyway, and only 450 million dollars if food, clothing, and fuel were exempted. That's practically small potatoes to the Treasury nowadays.

Increased excise taxes—perhaps up to 20% of retail price—can be expected on "products which compete with defense industries for materials and skilled labor." These include automobiles, refrigerators (ouch!), ranges, washing machines, radios, cameras, and phonographs, among other items.

Other excise tax increases can be expected on luxuries, such as

furs, jewelry, candy, "drinking" alcohol, and soft drinks.

Previously excise taxes have carried about 40% of our tax load, and "ability to pay" (income taxes) about 60%. Under the proposed new legislation, excise taxes would account for 34% of the total, and "ability to pay" about 66%.

Excess profits taxes will be revised, too. Very likely they will be levied on an invested capital basis only. This will broaden the base considerably, and make it simple to raise additional revenue at any time by merely raising the rates.

The tax people admit that excess profits taxes cannot be equitable to all, and note that excess profits taxes have been abolished in Germany, after a long trial. But excess profits taxes are politically desirable.

Income tax returns were filed by 7,400,000 Americans in 1940, of which 3,400,000 were taxable. In 1941, 14,280,000 Americans have filed returns thus far, and when all the late comers are in, the number is expected to reach 16,000,000. Of these, around 9,650,000 will be taxable.

April Sales Gain In Knoxville Reported

(Concluded from Page 1, Column 5) refrigerators at an average price of \$798, three air conditioning units at \$6,350, and two water heaters at \$50.

A more complete tabulation of April household appliance sales this year, as compared with 1940, follows:

Appliance	April, 1941 Unit Aver. Sales Price	April, 1940 Unit Aver. Sales Price
Refrigerators	829 \$147	601 \$143
Ranges	297 143	223 140
Water Heaters	227 75	127 80
Washers	308 80	393 77
Ironers	9 63	8 93
Vacuum Cleaners	59 62	160 69

McIlwraith Chairman Of Credit Group

BUFFALO — William McIlwraith of the Joseph Strauss Co., Inc. has been elected chairman of the Electric Appliance Group of the Credit Men's Association of Western New York. He succeeds Stanley A. Wolkenheim of Edison General Electric Appliance Co., Inc.

Bankers Suggest New Time Sales Standards For Big Appliances

NEW YORK CITY—A set of standards for time sales financing with minimum down payments and maximum periods for completion of payments has been recommended by the consumer credit council of the American Bankers Association.

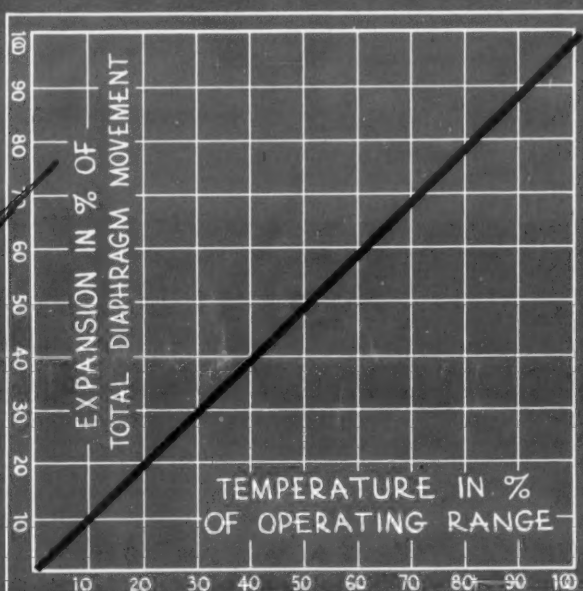
It suggests 15% down on household appliances with monthly payments limited to 24 months. For such appliances as washing machines, irons, cleaners, and sewing machines, it proposes 20% down and monthly payments limited to 12.

It proposes 33 1/3% down payments on new automobiles and used cars not older than three years with monthly payments limited to 18 months.

On older used automobiles it recommends 40% down payments and limiting of monthly instalments to 12.

"These terms," the report declared, "will put instalment lending on consumer goods on a sound basis which we believe to be important at any time, and especially important at this time."

WIN MORE CUSTOMERS



The uniform expansion responsible for the extreme accuracy of Hydraulic-Action Controls throughout their entire operating range is shown in the above straight-line expansion curve of the solid-liquid charge.

Hydraulic-Action

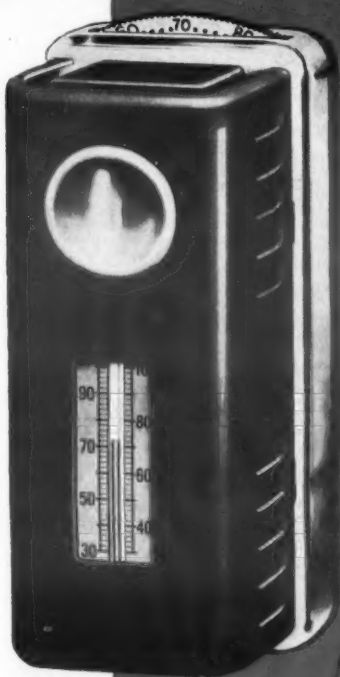
LINE VOLTAGE THERMOSTATS

The positive accuracy and rapid response of White-Rodgers Heavy Duty Line Voltage Thermostats to any selected temperature within their range, plus the convenience of dials uniformly calibrated in degrees Fahrenheit, can be found only in instruments incorporating the Hydraulic-Action principle of temperature control.

The tremendous power of Hydraulic-Action makes possible an exceptionally rugged switch mechanism with load carrying characteristics that enable White-Rodgers Thermostats to handle many multiple unit-cooler installations without the use of a relay.

An attractive steel case of rugged tamper-proof design makes these controls particularly suitable for auditorium, school and factory installations.

Learn how you can win more customers with the complete line of Hydraulic-Action Controls by writing today for your copy of the new White-Rodgers Refrigeration Catalog.



WHITE-RODGERS ELECTRIC CO.

1211e CASS AVE., SAINT LOUIS, MO.

Controls for Heating • Refrigeration • Air-Conditioning

St. Louis Department Stores Capitalize on Cooling

ST. LOUIS—How a retail establishment can capitalize upon the publicity value of an air conditioning system even before it is put into operation is illustrated in the case of Famous-Barr Co., St. Louis department store, in which what is claimed to be "the largest department store installation in the United States" has been made by Carrier engineers.

The system was designed by the store's own architectural and engineering departments, in cooperation with Carrier representatives.

Since much of the work could not be accomplished without some discomfort to patrons, the store's advertising department decided to capitalize upon these temporary inconveniences by giving customers a "running account" of how the installation was progressing.

ADVERTISING PLACARDS

Originating in the form of placards spotted in various departments in which installation work was centered from time to time, this pre-installation publicity, with the coming of warm weather, was extended through daily "weather forecast" insertions in the store's daily advertisement in St. Louis newspapers.

First of the placards, posted throughout the store during January, was headlined "Pardon Us!" and read: "We ask for your kind indulgence while our air conditioning experts are creating so much noise. We know it's an inconvenience, but you'll be amply repaid in months to come while you're shopping in air conditioned comfort at Famous-Barr Co."

WHAT GOES ON HERE?

Second placard, supplanting the first throughout the various departments sometime in March, pictured a workman busy with hammer and saw, and asked: "What Goes On Here?"

"The noise and goings on are just forerunners of the air conditioned comfort you will soon enjoy at Famous-Barr Co.," the message continued. "For any inconvenience, we ask your kind indulgence..."

The "shop in air conditioned comfort" phrase was repeated in each of the four posters used to detail progress of the installation.

Placard No. 3, appearing in May, pictured a stop-watch and the legend, "It Won't Be Long Now!"

"Summer is on the way..." the card read, "the noise our air conditioning experts are making will soon be over, and... you'll be shopping in air conditioned comfort..."

WORK PROGRESSES

Partial completion of the system was announced in the fourth placard, appearing during June, and headlined: "Parts of Our Lower Floors—Now Air Conditioned."

"More sections will be put into operation as quickly as possible," it was promised. "When completed, Famous-Barr Co. will have the country's largest air conditioning installation."

The "weather forecast" announcements in the company's daily newspaper advertising gave what amounted to a "floor by floor" account of the parts of the system which were being put into operation.

"Temperature drops in most of our basement economy store and part of our main floor!" headlined the first of these announcements, heralding the starting-up of the system serving these heavy-traffic departments. "Don't judge by these first breezes," copy cautioned, "for not until the installation is complete will you realize the full benefits of healthful, scientific air conditioning."

THE SYSTEM GROWS

In another "forecast," the store announced extension of the system to parts of the second, third, and fourth floors, adding that "Naturally, with only partial coverage, the effect is not perfect, and you'll have to wait until installation work is complete to realize the full benefits of this true air conditioning..."

Each forecast promised that additional sections of the store would be "cut in" as rapidly as possible, cautioned that the effect would not be perfect until the work was completed, and admonished customers, meanwhile, to "take advantage of these cool spots."

Customers Stay Longer And Buy More Goods

ST. LOUIS — Air conditioning when applied to department stores has many outstanding comfort benefits—but that it can also exercise major changes in the merchandising policies of the store is shown in the experience of Stix-Baer-Fuller, department store here which last year installed a \$350,000 York air conditioning system.

Included in the conditioning system are 32 fitting rooms on the third floor "fashion level" where all ready-to-wear is sold. These rooms, provided with individual grilles, ducts, and thermostats, are kept slightly cooler than the outside floor, inasmuch as women often spend an hour or so in them trying on various apparel. Comfort at this point is described by Walter Bode, store superintendent, as a strong

selling point toward attracting many new customers.

Closely benefitted by the fitting rooms is the Accessory Shop, fashion department which sells jewelry, bags, hats, gloves, neckwear, and shoes. Formerly, it was the policy of this department to invite its women customers to rest their entire apparel problems on one salesperson, who took the customer on "tour" of the store, selecting this and that item to be blended into a complete outfit. This time-saving feature built up a lot of extra business.

However, this entails an inescapable factor of fatigue on the part of the customer who often covered four floors in a single buying trip with the saleslady. Nothing could be done about it, however—until the air conditioned fitting rooms gave rise to a change which has paid the store.

Now, the customer makes only one trip—to the dress department, where she selects whatever basic

dress is to her liking. Then she is taken to the fitting room, where she can be left in the cool comfort of the curtained-off room, with comfortable furniture, to try on the dress at leisure. Meanwhile, her saleslady visits all accessory, millinery, hosiery, shoe, hat, bag, and other departments which contain accessories for the dress, and brings these to the fitting room in groups, so that the customer can leisurely make her selection.

With cool comfort during 100° days in St. Louis, it is not unusual for a customer to spend two hours in the fitting room, and sales have mounted substantially. There is no tiring strolling through the store, and the customer appreciates much more the efforts of her salesperson.

Steinhardt Takes York

ALBANY, N. Y.—J. M. Steinhardt, Inc., 340 Central Ave., has been appointed Yorkaire distributor.

Rotary Roof Cooler Removes Excess Heat

NEW YORK CITY—Removal of heat from the roofs of factories, markets, terminals, and other large buildings is said to be possible with the use of Ruppright's Rotary Roof Cooler, recently announced here. Employing the principle of evaporation of water from a warm surface to reduce its temperature, the rotary water spray has been designed to produce a maximum of results with a minimum of water.

Application of the unit to air conditioned buildings has been found to reduce the cooling load materially, it is claimed. It is also used to reduce the excessive heat found in the top floor of apartment houses.

The amount of water required by the Ruppright spray is 0.0375 gallons per square foot per hour. On a 70 x 70-foot roof, this amounts to 3 gallons per minute. City water, well water, or even warm water from a condensing unit may be used.



"How'd you like some
QUICK-FROZEN COFFEE?"

ANOTHER SUCCESS STORY ON THE POTENTIALS OF QUICK FREEZING!

IMAGINATION and a lot of experimentation. These two things led a frozen-foods distributor to a brand new idea in quick freezing—an idea that will make coffee lovers sit up and take notice.

This man studied coffee—found that when roasted, it contains 35% oil. The oil becomes rancid on exposure to air, causes coffee staleness. Why not quick-freeze the coffee, and thus preserve it against staleness?

After a year of experimentation, quick-frozen coffee was ready for the public. In the quick-freezing process, best results, and the most economical processing, are obtained by using "Freon" refrigerants. As a result, the price of this new coffee is surprisingly low—in line with that of today's popular-priced coffee. And so another success story goes down in history of quick-

freezing. Another story that shows the amazing possibilities of quick-freezing for profits.

How locker plants profit from systems using "Freon"

"FREON" IS HARMLESS TO FOODS! "Freon" refrigerants end any danger of heavy losses through spoiled meat, fruit, or vegetables in the event of refrigerant leakage.

IT FREEZES FASTER! Direct expansion refrigeration makes the plate system of quick-freezing the fastest economical freezing known. Foods in direct contact with the plate freeze faster than when they rest on pipes, which provide only a fraction of the cooling area.

NO BRINE PIPES! Plates take the place of the usual large amount of brine pipes. The elimination of pipes cuts down expense and reduces dehydration of unwrapped foods.



SIMPLIFIED DEFROSTING! Any frost that does form can be easily and quickly removed with a brush. This is important because it ends the losses in efficiency caused by heavy frosting of pipes.

LOWERS OPERATING COSTS! A system that uses brine adds to horsepower needs, often steps up power costs as much as 25%. And because of its compactness and fast freezing, the direct expansion system cuts down the size of the quick-freezing room and thus increases the space available for lockers.



KINETIC
FREON
REG. U. S. PAT. OFF.
safe refrigerants

"Freon" is Kinetic's registered trade mark for its fluorine refrigerants.

KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE

Correct Charges For Depreciation Needed In Dealer's Bookkeeping

Failure To Consider It Will Affect All Other Factors In Operating Statement

By Arthur Roberts

Editor's Note: This is another in a series of articles by Mr. Roberts discussing problems of accounting and control over operating factors by refrigeration and air conditioning dealers.

Previous articles have discussed such matters as budgeting expenses, and the ratio of fixed to variable expenses. Other articles will follow.

"I invested \$3,500 in showroom modernization and two new trucks, bought and paid for them in 1940, so why should I decrease my profits in 1941 and subsequent years with charges for depreciation? Such entries are only bookkeeping transfers, which will not affect my financial standing, neither will they make me any richer," said Arthur Edwards, air conditioning and refrigeration dealer, who had called us in to check over his books.

This dealer's reasoning about depreciation is similar to that of many others in this field and signifies the need for better synchronization with the facts.

Probably no other accounting subject has been covered in so many different ways in books, articles, accounting tracts, and speeches and this copious data on depreciation has done more to confuse the average air conditioning and refrigeration dealer than to clarify the muddy waters.

We shall try to set the Edwards' of this industry right on depreciation, presenting its fundamentals in a manner as simple as possible. With these basic factors clear in mind, the air conditioning and refrigeration dealer will have sufficient knowledge of depreciation to handle it properly for his purpose. Large manufacturers and utilities may need to ponder deeper stuff but not the retailers in this industry.

The subject of depreciation, for easy assimilation, may be divided into three main classifications: (1) Its purpose; (2) Its computation; (3) Its handling from an accounting standpoint. We will elaborate on these classifications in the order named.

The purpose of depreciation is twofold:

(a) to include the depreciation charge in overhead or direct departmental cost so that the cost of an asset, pro-rated over its life, or an allowance for a contingency may be recovered in the selling price;

(b) to record gradual decreases in asset value.

Edwards errs in assuming that he will not lose money by not charging profits with depreciation expense in 1941 and subsequent years. By the omission he will short-change himself because he will not add enough margin to his cost of sales, thus decreasing his profits on the year's business. Eventually, it will amount to the same thing as giving away the cost of modernization and the new trucks in short selling prices.

For example, if Edwards' sales are \$40,000 this year and his overhead expenses without depreciation total \$14,000, the overhead-to-sales ratio to be used in computing selling prices is 35%.

On the other hand, if his overhead plus depreciation total \$16,000, his overhead-to-sales ratio is 40%, hence, in figuring his margin of profit or spread without the depreciation expense included, Edwards will not be getting enough for his services or merchandise. He will cut his net profit 5%, which may be enough to put him in the red.

WHAT HAPPENS WHEN IT ISN'T CONSIDERED

To get profitable selling prices, the dealer must consider the percentage of overhead expense to sales and if this percentage is reduced through the omission of depreciation expense, his selling prices will be reduced accordingly.

Working assets, such as refrigeration and air conditioning equipment for re-sale, delivery trucks, fixtures, servicing tools, and office equipment, also accounts receivable, depreciate from wear and tear and because of other factors. By making annual charges for depreciation and allowances for bad debts and other contingencies, the dealer reflects this toll by reducing these asset values yearly.

The fact that Edwards had disbursed cash in a previous year for modernization and two new trucks is no reason why each subsequent year in which these assets were used should not bear a proportionate part of this outlay. Whether a working asset is bought for cash or on time payments has nothing to do with the depreciation charge, neither is the charge limited to the year of purchase.

Insofar as his net worth is concerned, Edwards also errs in assuming that, because he paid for the equipment, his financial standing remains unchanged even if he does not depreciate yearly. If his books show that the modernization investment and new trucks are listed at cost prices indefinitely, his net worth will be inflated.

Thus it is with many Edwards' in this field who have showroom equipment, trucks, store fronts, servicing tools, and office equipment recorded at cost prices, whereas, some of these assets are worth little more than scrap value and the remainder should be depreciated from the time of purchase. The statements of such dealers show a bloated net worth because they do not follow wise business practice and write down their working assets with annual depreciation charges.

DEVELOPING A METHOD OF COMPUTATION

Computation of depreciation is always an estimate. There is no way to calculate it to the penny. Other costs can be reduced to dollars and cents, but not depreciation. We have never known a case where depreciation charges at termination of the write-downs have equaled original cost on the books, whether or not salvage or trade-in value was considered.

The way to fix the depreciation rate is to take the cost-to-you of an asset, which is known. The unknown quantity, which puts the question mark on depreciation, is the profitable life of an asset.

Most dependable way to estimate its span of usefulness is to check against your own experience with the same or similar assets. Lacking such experience, seek advice from equipment manufacturers or other dealers with the same or similar assets or enlist the counsel of accountants.

Table 1—Depreciation On Ordinary Assets

Wooden buildings	3%	depreciation yearly
Brick buildings	2%	depreciation yearly
Hand tools	25%	depreciation yearly
Motor-driven and heavy mechanical equipment	20%	depreciation yearly
Outside signs, floodlights, clocks, etc	15%	depreciation yearly
Furniture, fixtures, and office equipment		
mechanical and non-mechanical	10%	depreciation yearly
Showroom and stockroom equipment	10%	depreciation yearly
Delivery trucks	25%	depreciation yearly
Accounts receivable	2%	of credit sales
Merchandise and supplies	1%	of yearly purchases

When you have set the life span, divide the years into the cost. The result is the annual charge for depreciation.

For example, a store front costing \$1,000 with an estimated profitable life span of 10 years will carry a depreciation charge of \$100 yearly against profits. In making the estimate, remember that you should consider the profitable life span, usefulness or capacity.

Scrap of trade-in value cannot be considered when fixing the depreciation charge. When working assets are eventually scrapped or traded in, an adjustment accordingly may be made on the books, but in most cases, this value is nominal unless the asset is fairly new and traded in for a larger unit before it has lived its profitable life.

Depreciation varies with the use of an asset. This, however, pertains more to the use of mechanical equipment than fixtures. A machine may last 10 years operated 10 hours daily and five years operated 24 hours daily. If depreciation schedules are based upon the normal use of equipment and business demands necessitate working it many hours overtime, obviously, it will wear out faster and the depreciation charge should be proportionately increased.

Depreciation varies with the working asset. Certain assets have a longer span of usefulness than others. This must be considered. The depreciation charge differs with the type asset. A building depreciates less rapidly than a cash register. The care given a working asset is another factor.

Obsolescence, in some cases, complicates the write-downs. Machines grow obsolete before they wear out or style changes in store fronts or display fixtures put a bustle on the merchandising accoutrements before old age breaks them down.

There are two kinds of obsolescence, that which is predictable with reasonable certainty and the accidental kind, unforewarned and, therefore, in the nature of a loss. The dealer need give little thought to obsolescence but if he figures that an asset will grow obsolete before its profitable capacity has been reached, he may consider obsolescence when fixing the depreciation rate. Obsolescence may be combined with depreciation or figured separately.

Many refrigeration and air conditioning dealers use the rates shown in Table 1 with satisfactory results.

Depreciation on hand tools and merchandise includes an allowance

(Concluded on Page 7, Column 1)

SQUARE D IN REFRIGERATION



CLASS 9150 SOLENOID VALVE

A neatly designed, compact unit. Quiet in operation—hermetically tight—moisture-proof—tight closing. Built for long, dependable service. Single or double voltage coils.

DO IT ALL WITH SQUARE D—SWITCH • PROTECT • REGULATE

SQUARE D COMPANY
REGULATOR DIVISION
DETROIT • MICHIGAN

Write for Bulletin

EXTRA REVENUE LINE FOR DISTRIBUTORS!



Sensational Tuthill Junior Ice Cream Plant—one of Tuthill's complete line of 1, 2½ and 5-gallon Freezers.

New profits for you—to supplement your present sales line-up. This dramatic revenue-producing equipment is packed with exclusive sales advantages, yet priced competitively for quick sale. Find out how these new Tuthill Freezers can give you the extra revenue you're looking for in today's changing market.

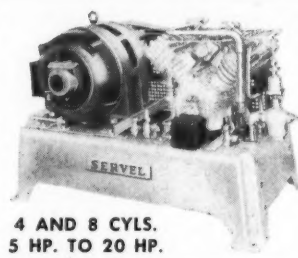
Write or wire for exclusive Franchise facts today.

REFRIGERATION PRODUCTS DIVISION
TUTHILL PUMP COMPANY
935 EAST 95TH STREET • CHICAGO, ILLINOIS

SERVEL MACHINES

FOR HIGH-CAPACITY REQUIREMENTS

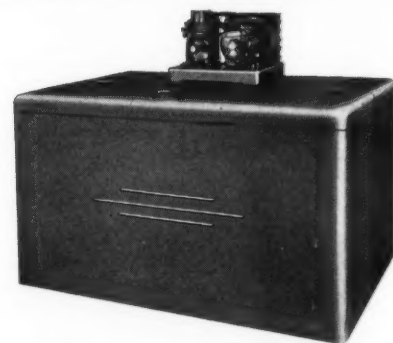
These heavy-duty models are designed for large commercial or industrial applications. For liquid cooling, locker storage, food processing, etc. 4 and 8 cylinders. 5 to 20 HP. Available with water-cooled condensers or for use with evaporative condensers. Write for details. Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Indiana.



4 AND 8 CYLS.
5 HP. TO 20 HP.

LA CROSSE BLUE RIBBON MILK COOLER

New Modern Design



New Popular Price

Four, six, eight and ten standard ten gallon can sizes. Armco rust resistant metal interior and exterior assuring long life—breaker strip—low density sealed insulation, protected coils, areator connections and removable overflow.

A Leader for Active Dealers
WRITE FOR FULL PARTICULARS

LA CROSSE NOVELTY BOX MFG. COMPANY
LA CROSSE, WISCONSIN

A QUARTER CENTURY HASN'T CHANGED THIS ANSUL SLOGAN...

"Dry as Sahara"

For 25 years Ansul refrigerants have been delivered to customers "dry as Sahara" . . . dry and clean and pure. Every cylinder is individually analyzed to give you laboratory-proved quality.

ANSUL SULPHUR DIOXIDE
METHYL CHLORIDE

Agents for Kinetic's "Freon-12"
ANSUL CHEMICAL COMPANY, MARINETTE, WIS.

WHEREVER YOU ARE, THERE IS AN ANSUL JOBBER NEAR YOU

Take Depreciation, or Your Profit Can Slip

(Concluded from Page 6, Column 5)

for theft, damage, shop-worn items, and loss. These rates are guides. In the final analysis, your experience should influence the fixing of rate schedules to a much greater degree than other factors.

The handling of the depreciation charge on the books involves the opening of an account for depreciation the same as for other expenses and charging profits with the annual instalment or preferably, $\frac{1}{2}$ of this sum each month. The offsetting credit goes to a reserve for depreciation. Compute this expense upon each asset separately but all the entries may be made upon one ledger page for convenience. Likewise, with the offsetting reserves. They may be placed on one page in the ledger.

An expenditure for replacements or repairs increasing the life of an asset beyond the original estimate should be charged to the reserve account, which prolongs the schedule that much more because it reduces that year's write-downs.

If you departmentalize, then charge depreciation on working assets to the department using them. Pro-rate depreciation on buildings owned the same as rent, according to the departmental space occupied for servicing operations, air conditioning, refrigeration, etc. Figure the area in square footage.

If you don't departmentalize, list depreciation under general overhead. Credit balances on reserve accounts resulting from annual depreciation charges to profits, should not bear interest.

Never increase the original cost of a working asset. Its market price may increase but this does not warrant the taking of appreciation. When assets are written down completely, depreciation ceases and obviously, profits in subsequent years tend to increase without this load.

Quite often we contact a dealer in this field who has written assets off the books so that they no longer are charged to profits via the depreciation account and they are reluctant to invest in modern units because they want to avoid reducing profits in subsequent years with depreciation charges.

This is short-sighted merchandising. Old display equipment curtails sales and increases overhead expense, likewise, old servicing tools and trucks, hence, these deficiencies exceed the depreciation charges brought into being by the purchase of modern equipment. It pays to keep modern.

ARRIVING AT THE RATE

"How shall I compute a fair depreciation rate?", is a question frequently asked by dealers in this field. There are 10 methods of computing depreciation and they cause considerable confusion. All recognized methods may be used by the same dealer. Many who ask us to detail the various methods, assume that a method other than the one they are using may reduce depreciation expense. We have done extensive work on all 10 methods and find that there are only three that we can recommend:

1.—The straight-line method of depreciation. The original cost of a working asset divided by its useful life, the result being the annual depreciation charge. If a working asset worth \$3,000 has a profitable life of six years, the depreciation charge is \$500 yearly.

2.—The reducing instalment method. The heaviest charges falling during the early years of use on the assumption that a working asset is second-hand in three months and would sell for half its cost. This reasoning is unsound, it seems to us, although some authorities favor it, but depreciation measures the service of a working asset, not its market value. Moreover, the average business must be considered a going enterprise and its operating expense handled accordingly. Then too, this method will swell costs and selling prices abnormally during the early years of equipment use.

Nevertheless, this method may be worth consideration from the standpoint of expense equalization. During the early years of use, repairs and maintenance on a working asset are low. In latter years, this expense mounts. By loading the early years with heavier depreciation

charges, this tends to equalize the expense over the years.

3.—The appraisal method. A physical check-over of all working assets to determine their worth, not in terms of remaining normal years of service as per depreciation schedules but with regard to actual physical condition. Even where another method is used, all depreciation accounts should be checked at least once yearly to determine how closely appraisal value lines up with book value.

We have found that straight-line depreciation is most satisfactory, simple, and safe. Moreover, the U. S. Treasury Department recommends it and 90% of the business organizations in this country, from the corner grocery to the big utility companies, use straight-line depreciation.

With business volume increasing, with purchasing power estimated at \$80,000,000,000 this year, make sure that depreciation expense is adequate so that you do not give away some of your working assets in short selling prices and also see that your old merchandising and servicing equipment is replaced with modern units so that you get your share of the boom business circulating in your territory.

Vacuum Cleaner Sales Up 23% In April

CLEVELAND — Vacuum cleaner sales for April totaled 210,274 units, an increase of 23% over the 170,664 units reported for the same month of last year, according to figures released by the Vacuum Cleaner Manufacturers Association.

Equipment Standards On Air Conditioning Adopted by ACRMA

WASHINGTON, D. C.—Equipment standards on six classifications of air conditioning equipment were recently adopted by the Air Conditioning & Refrigerating Machinery Association during a meeting at Hot Springs, Va. The new standards cover self-contained cooling air conditioning units, self-contained room coolers and conditioners, "Freon-12" evaporative condensers, liquid receivers, and location and inspection data plate on insulated refrigerant containing vessels.

This makes a total of 25 equipment standards which ACRMA has adopted in the past three years.

E. T. Murphy of Carrier Corp. was elected president of the association for the coming year, and C. E. Wilson of the Worthington Pump & Machinery Corp., and J. P. Rainbault of the General Electric Co. will serve as vice presidents.

P. A. McKittrick of the Parks-Cramer Co. was elected treasurer and W. H. Aubrey of the Frick Co. heads the board of directors. Other directors of the association for the coming year are P. Y. Danley, Westinghouse; J. M. Fernald, Baker; F. T. Goes, Vilter; S. E. Lauer, York; D. W. Russell, Airtemp; H. R. Sewell, Sturtevant; and G. E. Wallis, Creamery Package Mfg. Co.

William B. Henderson continues as executive vice president of the association.

Ainsworth Takes Post With Tuthill Pump



JOSEPH H. AINSWORTH

CHICAGO—Joseph H. Ainsworth, former design engineer for the Hall Mfg. Co. of Cedar Rapids, Iowa, has been appointed superintendent in charge of ice cream counter freezer production for Tuthill Pump Co.

D. L. Davis has been appointed factory manager in charge of engineering and production in the pump division, following the resignation of M. W. Huber. Mr. Davis is well known as an industrial engineer and consultant, and comes to Tuthill from the Hurley Machine Co.

R. J. Sipe, formerly auditor of the company, has been promoted to comptroller.

Aluminum Production Begun by Reynolds

LISTER, Ala.—First test runs recently completed at the Muscle Shoals aluminum plant of Reynolds Metals Co. were successful, reports R. S. Reynolds, president.

The plant was in production a day less than six months after ground was broken Nov. 20, 1940.

When in full production the plant will have a capacity of 40,000,000 pounds of pure aluminum a year. Date of full production is indefinite, but it is thought that capacity may be reached during July. This plant produces alumina from bauxite, which is further reduced to pure aluminum.

Construction has already started on Reynolds' other aluminum plant at Longview, Wash. Production will probably be started in August, with an eventual capacity of 60,000,000 pounds of pure aluminum annually.

The company had begun plans for the production of pure aluminum before there was any suggestion of a shortage, Mr. Reynolds pointed out. Last summer the firm mortgaged 18 manufacturing plants as security for an RFC loan to enable it to enter the producing field.

For some years the Reynolds company has been an important fabricator of aluminum products, being the largest producer of foil in the country. Eight plants operated by the company in Louisville, Ky. are working on defense orders alone, Mr. Reynolds said, while several other plants of the company are devoting much of their production to defense.

A good

"BUSINESS INSURANCE"

Policy

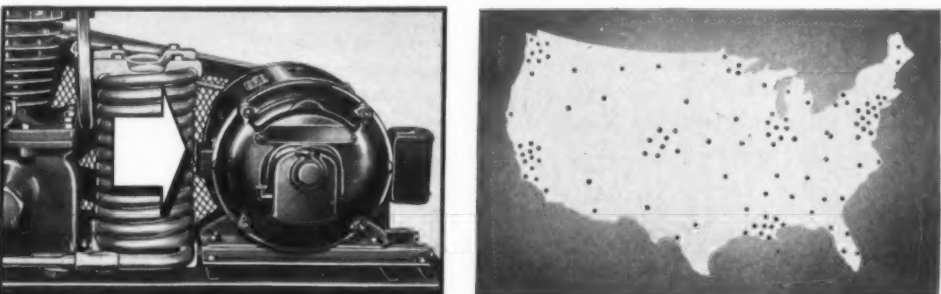
IS TO SAFEGUARD "GARDEN FRESHNESS"

Everyone's talking about frozen foods these days... farmer, storekeeper, housewife... for it's the finest way to preserve the garden freshness of vegetables for months to come. And, all along the way, Brunner condensing units help to safeguard the delicate flavor and freshness. Efficient and economical to operate, Brunner units give dependable refrigeration protection and provide uniformly correct temperatures so that foods are sure to stay wholesomely fresh. Brunner condensing units help to build and maintain customer goodwill, too. Designed and engineered for heavy duty work, they give years of performance at little operating cost. Check the features listed below and you'll quickly see why Brunner condensing units are the finest business insurance policy for safeguarding "garden freshness". Write Brunner Manufacturing Company, Utica, N. Y., U. S. A.

1 NO VIBRATION—Brunner units are designed and engineered by refrigeration experts. Smooth, quiet and efficient performance is built in. All moving parts are dynamically balanced for vibrationless, wear resistant service assuring long life and low operating cost.



2 INTERCHANGEABLE—The bronze bearings, silent eccentric drive, all-in-one valve assembly, cylinder heads, wear ever shaft, bellow seal assembly, and all other moving parts are precision machined. New parts are perfectly interchangeable with original units permitting important service savings.



3 OVERLOAD PROTECTION... Automatic reset integral overload protection (up to 1 h.p. incl.) prevents motor from burning out. Continuous refrigeration is assured, thus preventing spoilage.

4 EXPERT FIELD engineers are stationed in all parts of the United States. They are available for consultation in the solution of any refrigeration problem. Their practical experience will prove invaluable.

BRUNNER MODEL A-38

Horizontal condensing unit specially designed for self-contained frosted-food cabinets... 2 cylinder... air-cooled... $\frac{1}{3}$ h.p.

Brunner manufactures a complete line of condensing units from $\frac{1}{4}$ to 25 tons of refrigeration. Each unit carries Underwriters' Laboratories approval and U. L. Seal.



GET THESE
MONEY
SAVING
FACTS

BRUNNER
REFRIGERATION

SEND for the
"inside story".
Brunner superiority illustrated
point by point.

Air Conditioning & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office;
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Electric Refrigeration News

F. M. COCKRELL, Founder

Published Every Wednesday by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit, Mich.
Telephone Columbia 4242

Subscription Rates
U. S. and Possessions, Canada, and all countries
in the Pan-American Postal Union: \$4.00 per year;
2 years for \$7.00. All other foreign countries: \$6.00
per year. Single copy price, 20 cents. Ten or
more copies, 15 cents each; 50 or more copies,
10 cents each. Send remittance with order.

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VOLUME 33, No. 4, SERIAL No. 636
MAY 28, 1941

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Now Is the Time To Make Friends

IF purchasing and production problems have made delivering the goods harder than getting the order, now is the time for telling the world about your company, for advertising and promotion, for making friends—though without even trying to get the name on the dotted line. Now is the ideal time for an institutional promotion program.

Most of us have longed for the chance to tell all about our company, to indulge our pride in letting others know our worthy history and idealistic company policies. In the press for sales, however, we have had to sacrifice such pride and let our promotion efforts stick to a full-time job of producing immediate income. Now, for the first time in a long while, we can and should enjoy the indulgence of telling about our own company.

TRY TO TELL ALL ABOUT YOUR COMPANY

Our customers, our stockholders, our employees, and the public in general, all at times want to know more about our companies, our histories, and what we stand for. To maintain and build goodwill during a trying period, let's tell all, and in planning our institutional programs, let's be sure to do a real job of presenting the story.

The first step is to lay out your program in general terms, and this first step is the most important one, for once the controlling policies are planned, the rest follows naturally and easily. So let's cross-examine your company. Let's study its character, because an effective portrayal of this character, dramatically presented, is the basis for the whole institutional program. Let's ask of your company:

HOW ARE YOU UNIQUE AS A BUSINESS?

"How are you unique as a business enterprise? What distinguishes you from all others in your field? And how has your experience or position in your industry affected the quality and range of your products and service?"

"What have you done to promote

the general welfare? What has your contribution been, in taxes, in employment, and in cooperation with public and private enterprises, to promote public health and to forward civic betterments?"

RESEARCH TO RAISE INDUSTRY STANDARDS

"Tell us about any research you have done to improve industry methods and standards or to raise the standard of living. What did you do, and how did you do it?"

"What have you done, alone or in cooperation with other businesses or agencies, to improve trade practices or conditions in your industry—improvements which have been beneficial to your customers?"

"If you have paid attention to industrial relations, how have your labor policies contributed to industrial peace and harmony?"

"And, finally, just what kind of company are you? Have you high ideals, high principles? What are they, and how are they socially and economically beneficial?"

ANSWERS SUPPLY PROMOTION MATERIAL

When we have the answers to these questions, in all probability even you will be surprised at how much there is to admire about your company, and you will have the material for the most fundamental part of your institutional promotion program.

Next, consider your product. Perhaps you will find real drama in the circumstances—the struggle and the final triumph—of your product's invention. There is likely another story of interest in your raw materials—their sources, methods of selection, and testing.

CHECK OVER YOUR PLANT PROCESSES

Check over your manufacturing processes too, your plant and equipment, maintenance of standards, and watch for any unusual or dramatic operations. And don't forget your product's record in service, and the record of its present and possible uses, as a source for dramatic portrayal of your company's place in industry.

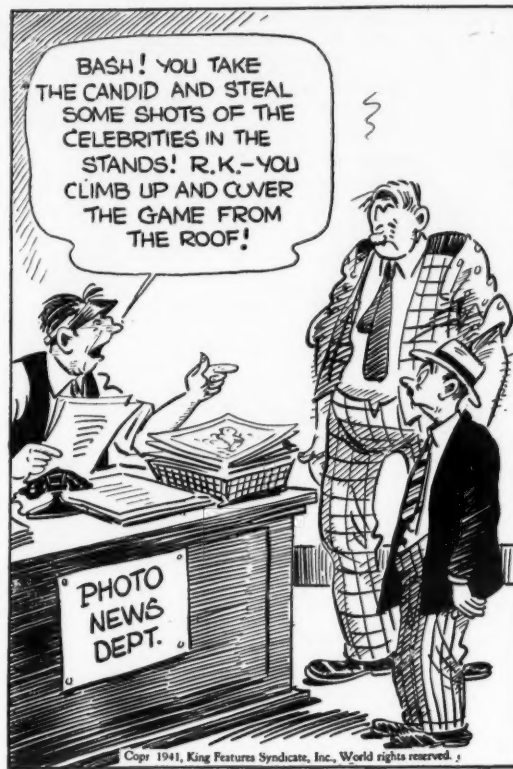
Your distribution policies may need to be explained, in terms of price ranges, channels of distribution, warehouse system, servicing, and plans for sales services and field service expansion.

PERSONNEL MAY BE MOST INTERESTING

Probably the most interesting stories built around your organization will be related to your personnel. People are nearly always interested in people. So in planning your institutional program, be sure to include the saga of your founder, with emphasis on his aims and standards and ideals. Tell about your present management, and the principles by which they direct your company's activities. Build a story around your production staff and the backgrounds of its key men. Remember that your research staff is an especially good source for promotion material based on dramatic achievement.

Tell all about your company and its personnel, and when customers and prospects begin to know and understand you, they will like you, even if you can't deliver on their orders by the end of next week.

They'll Do It Every Time By Jimmie Hatlo



LETTERS

WHAT ADVERTISERS SPENT IN 2 WEEKLIES

Edison General Electric Appliance Co., Inc.
5600 W. Taylor St., Chicago, Ill.

Editor:

I have read with a great deal of interest the lead article in your May 7 issue, giving figures on 1940 refrigeration advertising.

I am wondering why your figures did not include expenditures in such magazines as "American Weekly," and "This Week" magazine. These are checked by Media Records and other checking organizations and have figures available the same as on standard magazines.

It so happens that Hotpoint spent \$54,000 in "American Weekly" space in 1940, which, with our advertising in "Post" and "Collier's," makes a total of \$106,000 in national space. This would no doubt have changed the relative standing of the manufacturers materially.

While I am writing you, I want to express our appreciation for the splendid pictures and notices about the Misses Clara Jahn, Kathryn Jameson, and Cloe Boyle of our Home Economics Department. I am sure they also appreciate this splendid recognition.

W. A. GROVE, Manager
Advertising & Sales Promotion

Editor's Note: Following are the amounts spent on refrigerator advertising during 1940 in the two publications distributed with Sunday newspapers:

Crosley Corp. (Crosley Shelvador)	
American Weekly	\$11,000
This Week	14,100
Edison General Electric Appliance Co., Inc. (Hotpoint Refrigerator)	
American Weekly	\$54,000
Norge Division, Borg-Warner Corp. (Norge Refrigerator)	
American Weekly	\$18,000
This Week	14,100

Figures include only those companies which have used the equivalent of one page in either of the two publications.

DISTRIBUTOR RAPS REA PLAN

Carolinas Auto Supply House
221 North College St.
Charlotte, N. C.

Editor:

I have read with quite a bit of interest your article in the May 7 issue regarding REA offering refrigerators at farmers' prices. I had read a similar article in the Columbia, S. C., State paper a few weeks ago, but what I was chiefly interested in, and looked immediately for, was your editorial on this which I didn't see. Of course, I know there isn't much you can do about it, but I certainly would have been interested in your comments.

It looks rather serious for distributors that have quite a bit of rural area to work such as we have in the two Carolinas as distributors of Crosley Shelvadors. For instance, I was in Newberry, S. C. last week, in which town we have a very good dealer, and he was very upset due to the

fact that the REA Cooperative there had refrigerators and was selling them.

I told him I had heard the rumor, but did not know of any cooperative that had received any. However, I went down to this particular REA office and found they did have refrigerators. The man there told me that he had received 30 boxes and I could see that he had 15 or 20 in his warehouse. He had two on display, a 6 ft. box at \$89.95, and a 9 ft. box at \$129.95.

These prices, as you know, are quite a bit under the market and not only will it cut us, as well as other distributors, out of the REA business, but it is going to reflect in the towns also because if the farmer can buy refrigerators at these prices the user in town naturally assumes that he should buy at nearly the same price.

I know without a doubt that you have heard quite a bit about this, and I would certainly be interested to have your comments.

E. C. WHITE

Editor's Note: Cancellation of the plan of the Rural Electrification Administration to provide a specially designed lower-than-the-market price electric refrigerator was brought about recently when Stewart-Warner Corp. withdrew its offer to supply the refrigerator (see the May 14 issue of the News).

However, the REA says that "each particular cooperative" (that is, the local offices) can make arrangements to "make refrigeration facilities available to the cooperative members on terms justified by the mass market," and "REA will prosecute its new program of refrigerator financing by extending the procedures already proved successful in group-purchasing arrangements."

NEWS DISRUPTS MARITAL BLISS

Refrigeration Service
121 Chestnut St.
Muscatine, Iowa

Sirs:

I have mislaid the pamphlet carrying the specifications of the 1941 line of household refrigerators, which was sent to me with an issue of the News some time ago. I valued this pamphlet and would like very much to have another if they are still available.

The News brings me information that is of value to me in my work and data that is of interest to read; but—it also brings me grief. My wife thinks making service calls are much more important than reading the News. So once a week my marital bliss is disrupted by its arrival.

GEORGE ANGERER

'I ENJOY EVERY ISSUE OF THE NEWS'

M. W. McCarthy Co.
(Commercial & Domestic Refrigeration)
Stillwater, Minn.

Sirs:

Enclosed you will find a check to be used as payment of a two year subscription to the AIR CONDITIONING & REFRIGERATION NEWS.

I enjoy every issue of the News and am convinced that it is one of the best, if not the best, magazines issued on air conditioning and refrigeration. Each copy contains news or information that we find is valuable to us in our business.

M. W. MCCARTHY

Spending To Save**Hotel Will Save \$7,150 a Year With New \$14,000 Refrigeration System**

This is one of the modernized storage rooms in the Hotel Nicolet. Unit coolers replace brine coils formerly used.

MINNEAPOLIS—Savings of \$7,150 a year are expected from the new \$14,000 refrigeration system and ice-making machine installed in the Hotel Nicolet here to replace old equipment, thus permitting realization of the investment in two years' time.

Reduced electric current costs and elimination of buying additional ice result in these large savings over previous operating costs, while there is now closer control of temperatures making for better food preservation. The hotel also added a quick-freezing room.

ORIGINAL EQUIPMENT

The equipment originally installed when the hotel was built consisted of a horizontal carbon dioxide compressor operated by a 75-hp. motor. An ice-making tank of 4-ton capacity was built to provide a surplus of brine for circulation through refrigerators in the basement and on the main floor.

While the system produced fairly satisfactory refrigeration, power cost was high. Defrosting of the brine coils required considerable length of time so consequently the hotel delayed defrosting as long as possible, resulting in a heavy accumulation of frost on the coils.

Frequent repairs to the insulation of the brine pipes finally led to the need for complete replacement. When the hotel learned that complete new cork insulation would cost several thousand dollars, it was decided to install a modern refrigeration system.

HAVE DEFROSTING CYCLE

Several smaller units, each balanced for its own particular load, and which would operate automatically, were planned. Since the units would have a defrosting cycle in those spaces operating above 33° F. the old defrosting problem would be eliminated.

In the new system the refrigerators have been divided into seven groups, with one condensing unit taking care of one, two, or even three, four, or five refrigerators. Total compressor horsepower is 34½. There is also a 3-hp. motor-driven pump which circulates brine through a shell-and-tube "Freon-12" brine cooler.

The smaller ½ to 3-hp. compressors operate intermittently, the longest operating period for any one unit not exceeding 16 hours a day. Higher temperature rooms have unit coolers, while the low temperature rooms use coils.

Six tons of ice are produced daily by the new ice-making tank, compared to 3½ to 4 made by the old plant. With a thermostat in the brine flow, the compressor operates automatically. On days when the

hotel uses less ice, the unit is frequently shut down for long periods of time. A low pressure air circulating system provides clear ice, which is made from softened and filtered well water.

Additional refrigerated storage space was gained by installation of modern small cooling units to replace the large brine coils formerly used. Storage was increased 20%.

Electric power saving with the new system amounts to 20,000 kwh. every four weeks, or 260,000 kwh. a year. At a cost of 1½ cents a kwh. this totals \$3,900 yearly. Yearly cost of additional ice purchased by the hotel amounted to \$3,250, or a total saving of both power and ice totaling \$7,150 a year.

Jack Langston Builds New Factory For Case Line

DALLAS, Tex. — New building housing larger manufacturing quarters, offices, and display room will be constructed here by Jack Langston Co., maker of the "American" line of commercial refrigerated cases. The firm is operated by Jack Langston, Sr., assisted by his son, Jack, Jr.

Of brick and steel construction, the structure will have a frontage of 77 feet and depth of 192 feet. Site is as yet undetermined, but it is expected that the building will be ready for occupancy by Sept. 1. Display room located at the front of the building will be 65-feet x 25 feet, provided with fluorescent lighting.

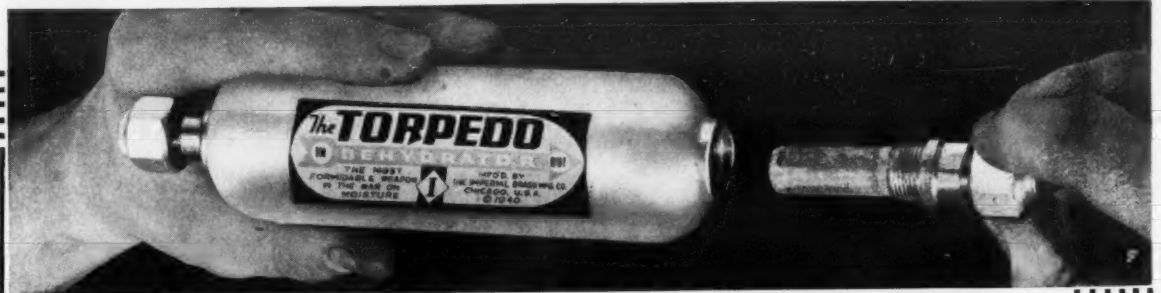
Railroad siding and adequate truck facilities are planned for the factory.

"With the plant we will be able to handle a volume of \$500,000 annually," predicted Mr. Langston. "This figure is based upon the production we have been able to maintain in our cramped quarters here. All of the machinery and other production equipment to be used will be of the latest design."

Manufacturing operations were started by Mr. Langston on the third floor of the building he occupied on Commerce St. near Pearl, part of "Refrigeration Row."

Mueller Brass Declares 75 Cent Dividend

PORT HURON, Mich.—Dividend of 75 cents, payable June 16 to stockholders of record June 6, has been declared by Mueller Brass Co.



TORPEDO

(Patent applied for)

DEHYDRATORS



If you use this new Imperial Torpedo Dehydrator just once you will understand why servicemen everywhere have used thousands of them.

Write for your copy of the 1941 Condensed Catalog.

THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago

IMPERIAL

STRAINERS • DEHYDRATORS • VALVES • FITTINGS • FLOATS • CHARGING LINES
TOOLS FOR CUTTING, FLARING, BENDING, COILING, PINCH-OFF AND SWEDGING

Flake Unit Cuts Costs In Sausage Making

DALLAS, Tex.—Use of a York "Flak-Ice" machine has enabled Neuhoof Bros., local meat processing and packing firm, to effect numerous economies and improvements in the company's sausage production plant, according to Joseph Neuhoof, one of the operators. The machine was installed by Dallas Air Conditioning Co., Inc.

Modern sausage-making equipment, Mr. Neuhoof points out, has been speeded up to handle increased volume, and this increased machinery speed has resulted in an increase in the amount of heat generated. Some means must be employed to counterbalance this heat load in order to prevent a large measure of spoilage in the meat.

Ordinary chipped ice was used originally, Mr. Neuhoof explains, but its lack of uniformity made it impossible to obtain maximum efficiency of equipment operation. Another problem was to evenly distribute this ice throughout the meat.

Both of these problems have been solved, Mr. Neuhoof reports, by use of the Flak-Ice machine, the thin and uniform flakes of ice being fed through the cutting knives along with the meat. Cost of operation under this new system has been materially lessened, he says, for there is no longer any necessity of diverting labor to the task of providing the chipped ice, and no ice is wasted since production can be made to conform with the current demand.

Potato Growers To Help Gov't Agencies Make Pre-Cooling Tests

KEARNEY, Neb.—Potato growers in this area have agreed to cooperate with governmental agencies in experiments to determine the value of pre-cooling potatoes before they are shipped to market.

This practice was started several years ago and has been growing in use, as many growers have found they could command better prices and cut down shrinkage and spoilage by having truck-mounted refrigeration units run alongside the loaded railroad cars and lower the temperature in these cars by "piping in" refrigerated air through canvas tubing.

A. D. Edgar of the federal marketing service, Scottsbluff, Neb., will have charge of the experimental work in the Kearney area, and G. B. Ramsay of the federal marketing service, Chicago, will check the railroad cars after they have arrived in Chicago.

Super Cold Builds New Factory

LOS ANGELES—A new one-story brick factory building is being erected for the Super Cold Corp. at 1016 E. 59th St. here, covering an area of 117 x 249 feet and costing \$63,000.

Business Booms as Meat Cases Stage 'Comeback'

BIRMINGHAM, Ala.—With meat cases making a definite comeback, business is probably the best ever for Lancaster Equipment Co., reports Clyde L. Lancaster, operator of this McCray dealership.

About \$6,000 worth of equipment was recently installed by the firm in Randman's Bohemian restaurant. Included were a 6 x 16 foot built-in storage box, a 10-foot beverage cooler, 12-foot delicatessen case, a dairy case, and a 40-cu. ft. chef's box.

Beverage coolers and the new serve-yourself dairy boxes for grocery stores are among the biggest selling lines today, Mr. Lancaster finds.

Lincoln's Auditorium To Have Ice Rink

LINCOLN, Neb. — A municipal auditorium containing a mechanically refrigerated ice skating rink will be constructed here in about a year. Voters recently approved a special levy of which \$900,000 is earmarked for the building.

This will be the second such rink in the state, Omaha having installed a rink in the Ak-Sar-Ben coliseum when that city entered the American hockey league some years ago. Razing of a building will delay starting of the Lincoln project.

92 Pages of
Practical Information
for
Refrigeration Engineers



METHYL CHLORIDE MANUAL



This new Methyl Chloride Manual contains chemical, physical, physiological and refrigerating data . . . tables of thermo-dynamic properties . . . engineering information . . . handling and servicing methods. Send for your free copy today!

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THE R. & H. CHEMICALS DEPARTMENT
E. I. DU PONT DE NEMOURS & CO. (INC.)
Wilmington, Delaware
or National Ammonia Division
Frankford P. O., Philadelphia, Pa.

Dealer Advises

To Sell an All - Electric Kitchen, Sell the Complete Kitchen—From Floor To Ceiling

ST. LOUIS—Operating on the theme that "it's easier to sell a complete planned kitchen than a single appliance," the Melcher-Schene Hardware Co., G-E dealership, during 1940 sold 100 more refrigerators, ranges, and washing machines than during 1939—all sales which accounted for an extra \$200 or \$300 in cabinets, sinks, and linoleum floor coverings.

Ben J. Melcher, president of the Melcher-Schene firm, believes that the easiest way to sell the complete line of a major appliances handled, is to create a market for it. The easiest way of accomplishing this, he has found, is to get the housewife or homeowner to modernize to the point that the kitchen is incomplete without modern electrical appliances.

SELL ENTIRE KITCHEN

Two years ago, Melcher-Schene threw out all former merchandising plans and began a new theme of selling complete kitchens before mentioning the electrical appliances. They now sell the entire kitchen, from floor to ceiling, at prices from \$200 to \$900, with or without refrigerator, range, or other electrical equipment.

Contracted for on a single order is linoleum floor covering, Marlite wall tilings, metal enameled cabinets, cabinet sinks, lighting, and painting. Instead of pushing the theme of all-electric kitchens as such, Melcher-Schene sells the "basic requirements" for the all-electric kitchen—then goes into the sale of its appliances after the kitchen has been ordered to be installed.

"We do not always get the order for a new refrigerator and a new range when we sell the kitchen job," Mr. Melcher says, "but there has never been a single installation in which we did not sell a new refrigerator, range, small appliances, or something of the type within 30 days. When such a kitchen is laid out around a refrigerator which may be five or six years old, it soon

becomes an eye-sore to the housewife—and we inevitably get the order."

Four outside salesmen, all paid on a combination salary and commission basis, are responsible for all such sales. Invariably, every sale begins with the purchase of linoleum, which Melcher-Schene advertises widely in weekly community newspapers. Using a "leader" offer of complete linoleum for a 10 x 8 kitchen—most standard size in St. Louis—for \$8, the company gets a continual stream of leads from women interested in new linoleum.

MODELS ARE USED

Once the linoleum has been ordered, salesmen immediately go into the complete kitchen plan. Each carries a miniature model of such a kitchen, which folds up in his briefcase, and brings this into play as quickly as possible. Inside the store, Melcher-Schene has two model kitchens, one costing \$350 another \$600, for the use of salesmen in demonstrating the idea to customers who can be brought inside the store. Both the miniature kitchens and the two store model types have been powerful selling agents.

"We sell from the ground up," Mr. Melcher explains. "Beginning with the floor linoleum, then jumping to the sink, then cabinet, then wall finish, and finally, electrical appliances. Our most attractive offer is a complete kitchen, installed, at a price of \$6.34 per month. With a range and refrigerator, this is jumped to \$11.40 a month—a price not at all out of the reach of the average buyer."

Once the model is complete (the entire installation is made by a permanent staff of four men in the employ of Melcher-Schene) the salesman quietly asks the prospect what size refrigerator or range he wants. In this way, even though the customer may have had no thought of buying either, the desirability of major appliances to match the rest of the kitchen is brought up.

The majority of customers order at once. Those who do not can always be depended upon to buy within 30 to 60 days, the store finds. In this way, Melcher-Schene frequently adds \$400 in appliance sales to the already-profitable complete kitchen job.

Wilmington's Pioneer Appliance Dealer Adds New Store

WILMINGTON, Del.—A second appliance store has been opened at 904 Orange St. by Harvey H. Poole, pioneer appliance dealer who has been operating an outlet at 837 King St. for the past five years.

Poole's handles sales and service for Westinghouse, May Oil Burner, Bendix, Elliot-Lewis, and American Stove Co.

To publicize the opening of the store a seven-page section in the "Wilmington Journal" was taken. Numerous advertisements, both by Poole's and by other firms offering congratulations, appeared, in addition to many stories on the new outlet and on modern appliances in general.

The first three days the store was opened a total of 40 refrigerators was sold.

Entering the appliance field in 1919 as a washer salesman, Mr. Poole later became a washer distributor with headquarters in Philadelphia, covering eastern Pennsylvania, Delaware, Maryland, and the District of Columbia.

In 1925 he returned to Wilmington to establish an electrical appliance firm. Mr. Poole made one of the first large refrigerator installations in this territory when he sold 75 of the early electric refrigerators to a Baltimore apartment house.

Mr. Poole's original store was located at 3 E. Ninth St., and continued for 11 years until expansion forced establishment of the 837 King St. location.

His policy of "service before sales" has been a major factor in the growth of the business, Mr. Poole believes. He has maintained a small, but personalized, sales staff to give customers a maximum of courtesy and sales effort, and has always kept an efficient service staff.

"Customer satisfaction is always an essential with me and my staff," Mr. Poole explains. "We always take as much interest in our customers after the sale of a piece of equipment as we do before that sale is made. And it is for this reason that we do not have to depend on a large sales force because nearly 75% of our business comes from satisfied customers who recommend us to their friends."

4 New Dealerships Formed In Albany

ALBANY, N. Y.—New refrigeration and appliance dealerships recently organized here include Griswold & Jacobs, 847 Madison Ave.; Schottenham Electrical Appliances, 295 Central Ave.; United Refrigeration Sales, 238 Central Ave.; and F. J. Biehler, 280 S. Pearl St.

Lynn, Mass. Utility & General Electric Sponsor Exhibit To Show Electrical Aids To Living



When the Lynn (Mass.) Gas & Electric Co., with the assistance of General Electric Co., sponsored an electrical exhibit recently, A. L. Scaife, G-E merchandising manager, and Gordon Craig of the Boston factory branch dropped in to see how things were going.



Nelson J. Darling, manager of G-E's Lynn works, and H. M. Kelley, president of the Lynn utility, hold the "key to better living."

Norge Has 9 Models In 1942 Heater Lines

DETROIT—Norge's 1942 space heaters consist of nine models comprising the Fastemp, Hytemp, Raytemp, and Radiant lines.

Leaders are the two new Fastemp models, FH-70 and FH-55, of 70,000 and 55,000 B.t.u. capacity, respectively. These heaters are finished in porcelain enamel inside and outside. They feature the Norge L-shaped heat distributor, down-draft Whirlator, and a patented radial orifice.

A single dial heat selector automatically balances flow of air and oil to the burner. Automatic chimney draft regulators are standard. Available as an accessory to the Fastemp models and two Hytemp models is the air power blower which circulates heated air around the room.

Also supplied at additional cost where poor draft conditions interfere with performance of the heaters is a power blower or draft booster.

The three Hytemp models, HH-65, 50, and 37, with B.t.u. outputs in thousands corresponding to model numbers, are uprights. HH-65 and HH-50 can be equipped with air blowers and draft boosters.

Two models comprise the Raytemp line, the DRH-50 and DRH-37, with 50,000 and 37,000 B.t.u. capacities, respectively. A specially designed cabinet for these upright models has a grille which permits direct radiation of heat besides circulating heat.

Rounding out the Norge line are two low cost Radiant heaters supplied without cabinets. Models RH-50 and RH-37 have same capacities as the corresponding model numbers in the Raytemp series, as well as the same standard equipment.

MUELLER BRASS CO. Improved HEAT EXCHANGER

Compact and Efficient For Ice Cream Cabinet Installation

● The Heat Exchanger illustrated below is an addition to our line and intended for use in ice cream cabinet work and in similar installations where a small, compact, yet very efficient heat exchanger is required. Note that overall length is only 8 1/4".

It is designed to provide maximum heat exchanging capacity where available space is at a premium. Special combinations of inlet and outlet fittings can be furnished so that this compact unit can be adapted to your particular requirements.

Catalog No.	Suction Line	Liquid Line	Overall Length	Heat Transfer Area
A-13730	1/2" Flare	1/4" Flare	8 1/4"	18 Sq. In.

Flare Nuts and Seals are furnished with Exchanger, thus keeping units dry and clean.



MUELLER BRASS CO.
PORT HURON, MICH.

Anaconda Copper Refrigeration Tubes

"Cutting off"—Shown in new booklet—Ask for a copy



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices, Waterbury, Conn.

HOUSEHOLD
APPLIANCE DEALERS

A New

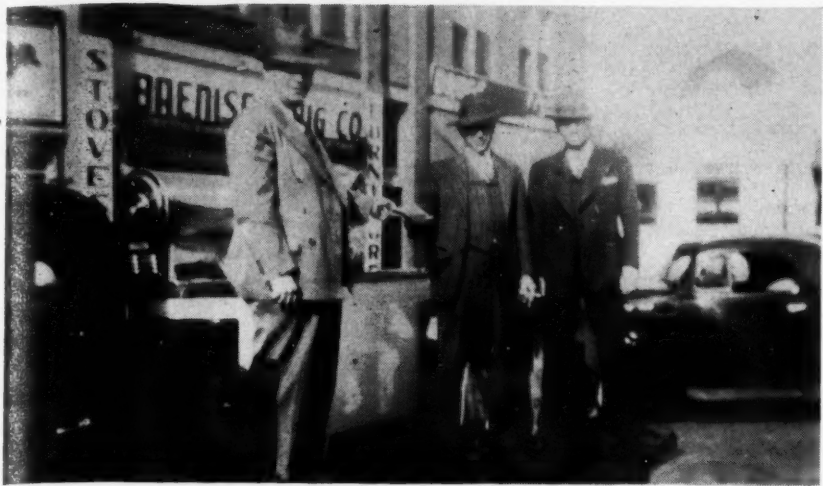
Book For You

Is Coming

Soon!

ANNOUNCEMENT
NEXT WEEK

Carloads For Kansas



Business comes in carload orders these days. H. F. Lorsch (center), sales manager of Commercial Equipment Corp., Kansas City distributor, hands Carl Moore (left), Taylor Freezer Corp. zone manager, a purchase order for two carloads of various models of Taylor "DuMore" freezers as J. G. Bryan, Wichita office sales manager, looks on. The photo was taken in Wichita. Freezer on the truck is about to be delivered for installation.

Final York Merger Vote Due May 28

YORK, Pa.—At the adjourned meeting of the stockholders of York Ice Machinery Corp., held May 20 to take action on the proposed merger with York Corp., there were present by proxy in favor of the merger 40,368 shares or 75.6% of the preferred stock, and 121,326 shares or 75.1% of the common stock. Objections have been made to the plan by the holders of 7,171 shares, or 13.5% of the preferred stock, and 305 shares of common stock.

In view of the uncertain attitude of some objectors holding substantial amounts of stock, the directors recommended a further adjournment of the meeting to May 28.

New Kason Door Gasket Has Fabric Flange

BROOKLYN — A new gasketing material for all refrigerator uses, known as the "Rubba Gasket" has been announced by Kason Hardware Co. here. The flange of the rubber gasket is a fabric which has been woven tightly around a mesh of spring wire.

The flange and wire are both moulded firmly into the sponge rubber bead on the gasket, so they cannot pull apart. The company asserts that the gasket is easy to handle and that it fits snugly into corners when attached.

The Service Man's Notebook

By Henry Kronke

Mr. Kronke, a service engineer in New York City, compiles useful, handy data for use in his work as he finds a repeated need for certain kinds of information. The editors suggest that service and installation engineer readers of the NEWS cut these tables out for their own notebooks.

REFRIGERATION FOR PHOTOGRAPHERS

Refrigeration for photography is a problem of liquid cooling requiring accurate control of solution temperatures. The temperature usually desired is 66° F. with a variation of 1° to 1½° F. plus or minus.

The coils in the solution must be made of lead or stainless steel, since the solution will corrode most other metals. For this reason it is best to use an indirect heat transfer, employing circulating cold water.

The load is composed of the heat leak into the tank, and the pipes, the heat input by the circulating pump and the cooling down of the films and prints to the solution temperature, and finally the heat of reaction. No information is available on the last two items, and it is suggested that 10 to 25% of the heat leak added will cover this part of the load.

Where the water for washing the films and prints also must be cooled, it is recommended that a heat exchanger be employed. If this double pipe heat exchanger is of sufficient length, the waste water will cool the incoming water down considerably. The hourly flow of water through the washtank should be 4 to 6 times the capacity of the tank.

TRUCK REFRIGERATION

When calculating refrigeration loads for trucks it should be remembered that they are for many hours exposed to the direct sunlight and for this reason 10° to 15° F. should be added to the temperature differential.

Plate or pipe coils are used and capacities of bare pipe coils are found in the proper table. For higher temperature than shown in this table use a "K" factor of 2.0 to 2.5, depending on the temperature differential between the coil and the air flowing over it. The greater the T.D., the greater the "K" factor.

The insulation of trucks should be as follows:

Inside Temperature Below 25° F.	= 5 Inches of Cork
Inside Temperature 25° to 40° F.	= 4 Inches of Cork
Inside Temperature 40° to 60° F.	= 3 Inches of Cork
Inside Temperature Over 60° F.	= 2 Inches of Cork

Safe Ways To Handle Ammonia Told In Mathieson Booklet

NEW YORK CITY—The properties and safe handling of ammonia are set forth in a booklet, "Mathieson Anhydrous Ammonia," published by the Mathieson Alkali Works, Inc. here. Today the most important production of ammonia is by means of the synthetic process.

Ammonia is stable up to temperatures of 1,000° F., and will neither burn nor support combustion, but air containing from 16 to 27% of ammonia can be exploded by sparking. The common metals are not affected by dry ammonia, but moist ammonia will react rapidly with copper, brass, zinc, aluminum, and many alloys, especially those containing copper.

The booklet states that "it is important, in handling ammonia, to recognize that it is a liquefied gas stored under pressure and that as such, containers should not be subjected to abnormal mechanical shocks, or to temperatures exceeding 100° F. Cylinders should be stored in a clean, dry place.

"The room in which ammonia cylinders are stored and used should be equipped with an exhaust fan located near the ceiling. In case of a leak, the ammonia, being lighter than air, will rise and be removed. Bottle type cylinders should be stored upright. Tube cylinders should be stored horizontally and blocked to prevent rolling."

Care should be taken in handling ammonia cylinders, the booklet points out, and "bottle type cylinders should never be lifted by passing a rope or chain through the cap slot."

Ammonia leaks are located with a sulphur taper. Leaks are indicated by the pungent smell that is characteristic of the gas. The booklet gives first aid information for treatment of persons overcome by ammonia.

Detroit Contractors Name Mabley, Page

DETROIT—T. H. Mabley of Mechanical Heat & Cold, Inc., and C. W. Page of the Detroit Kelvinator branch were elected to the directorate of the Refrigeration Contractors Association of Detroit at a meeting here last week. George C. Murphree of Refrigeration Maintenance Corp. was elected sergeant-at-arms.

Jack Duncan, Duncan & MacNicol, president of the newly organized association, presided at the meeting. Harry Heberlee, chairman of the board of directors, submitted a constitution for the association, which was unanimously adopted by the group.

Under the constitution the purpose of the association "shall be to advance the art of refrigeration and to deal with problems common to the membership as a group." Individuals, partnerships, firms, and corporations lawfully engaged in the installation and service of refrigeration in metropolitan Detroit are eligible for membership.

The constitution provides for five officers and seven directors, and the latter will establish the basic policies of the group. By-laws necessary to the operation of the association are to be formulated by the directors and approved by the membership.

Amendments to the constitution may be proposed by any member, with the approval of two officers or directors. Members will receive written notice of any change in the constitution at least two weeks prior to a regular meeting, at which the change will be voted upon. Meetings will be held once each month throughout the year.

Approximately 50 refrigeration firms were represented at the last meeting, and according to James E. Perry, secretary of the association, about 75 firms have already indicated their desire to become affiliated with the group.

G-E Has Starter For Small Condensing Units

SCHENECTADY, N. Y. — Quiet performance is the chief feature claimed for the new lift type full-voltage magnetic starter announced by the industrial department of General Electric Co.

The starter is designed for control of small condensing units, domestic air conditioning fan motors, or any a.c. motor where quiet operation is important, as in restaurants, hotels, hospitals, or commercial establishments.

Motors up to 5 hp. and 220 volts can be handled by the control, which starts, stops, and protects from overloads and overheating by means of manual or automatic-reset isothermal overload relays.

Heavy, gasketed, cast iron, water-tight housing is said to muffle the sound of contactor operation. Heavy rubber bushings separate the three-pole contactor from its enclosure to further isolate sound.

Correct sequence of starting can be assured by electrical interlocking with other devices through use of an auxiliary normally open contact. The operating coil is electrically isolated from the power circuit. Double break switch contacts are made of silver. The case is finished in aluminum lacquer.

G. B. Berry Joins Orr

ASHEVILLE, N. C.—G. B. Berry, formerly engaged in the commercial refrigeration business, has joined Orr Refrigerating Co.

★★★★★★★★



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.

★★★★★★★★

We want everyone interested to have a copy of the **NEW KEROTEST CATALOG** No. 10 OF AIR CONDITIONING AND REFRIGERATION PARTS

MAIL THIS COUPON

Kerotest Manufacturing Co.
2525 Liberty Avenue, Pittsburgh, Pa.

I am interested. Please send my copy of the new Kerotest Catalog No. 10.

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Experts Explain How

Portable Immersion Freezers May Aid Southern Farmers

AUSTIN, Tex.—A brief summary of the origin and development of the immersion process of freezing fruits and vegetables, and a report on the present status of this process, were contained in the paper prepared for the University of Texas Food Preservation Conference by J. G. Woodruff of the Georgia Experiment station and J. O. Tankersley of the Tennessee Valley Authority.

"Freezing by direct and indirect immersion has been studied and practiced for more than 100 years," this paper reveals, "especially in England and Europe. One of the earliest patents applying to this process is the Benjamin patent of 1842.

EARLY PATENT

"In a patent dated 1882, Thew proposed to apply sudden and extreme cold to food products by packing them in cans with flat sides close together, and applying a refrigerant to the outside of the cans.

"The immersion method of freezing was not commercialized by American engineers, however, until the last decade. In 1937 this method was described as being especially suited to freezing strawberries. Two years later it was advocated also for freezing other berries, most fruit, and some vegetables, especially lima beans and asparagus.

"In 1938 Woodruff published figures and photographs showing that fruits and vegetables frozen by immersion had smaller ice crystals, less leakage, and greater firmness than those frozen by commercial processes then in use.

"That the principle of heat transfer by immersion is sound is indicated by the success and popularity of the method of cooking known as 'French frying.'

FREEZING AND COOKING

"Freezing and cooking by immersion are markedly similar in both theory and mechanics. In both cases the liquid heat transfer medium affords very rapid temperature equilibrium between the product being processed and the medium itself. Each particle of food is treated individually. Heat transfer is uniform due to the equal movement of the transfer medium on all sides of the product.

"The individual pieces of product are usually coated or treated immediately before immersion to prevent the loss of juices, flavors, or volatile materials from the product, and to prevent undue penetration of the immersion medium.

"After processing there should be an immediate and thorough removal of liquid from the product, to prevent diluting the product with liquid and

to prevent loss of temperature and liquid.

"Temperature of the medium must remain as nearly constant as possible. The heat transfer medium must be edible, odorless, and kept clean by filtration and clarification.

"Biggest difference between immersion cooking and immersion freezing is that high temperature promotes fluidity and penetration of the medium, while low temperature produces viscosity."

PRESENT STATUS

Commenting on the present status of immersion freezing, the report offered this information:

"The experimental freezing plant at Cleveland, Tenn., which was used in developing and demonstrating the immersion process of freezing on a semi-commercial scale has been leased to a cooperative group of farmers for commercial operation.

"This plant, which was built in 1939, has a capacity of 1,000 pounds per hour. Strawberries, peaches, and lima beans have been frozen in this plant commercially for three years.

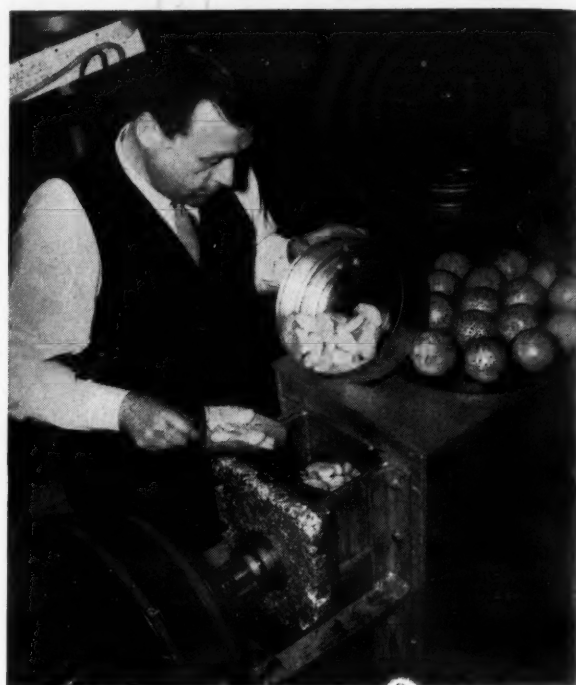
"The cooperative which now operates the project is known as Chickamauga Producers, Inc. During 1940 Chickamauga packed 100,000 pounds of individually frozen strawberries and 200,000 pounds of sugar-packed strawberries. It also packed by immersion 40,000 pounds of lima beans, 17,000 pounds of garden peas, 10,000 pounds of corn, 15,000 pounds of string beans, and about 3,000 frying chickens.

"The firm plans to increase its strawberry pack to 500,000 pounds in 1941.

"In 1940 the Tennessee Valley Authority constructed a 2,000-pound per hour freezer similar to the one

Feeding the Food to a Freezer

Luis H. Bartlett of the University of Texas bureau of engineering research "feeds" the small, light weight, and comparatively inexpensive immersion food freezer he developed. He calls it a "polyphase quick freezing system."



Super-Market To Have Locker Plant

ST. LOUIS—A 200-locker frozen food storage plant is scheduled to be built here during June in connection with a new Brentwood Super-Market. The super-market will offer the advantages of locker plant renting to its regular customers, who may thus buy in larger quantities and store their foods immediately after purchasing.

The plant will be housed in a one-story 60 x 50-foot brick building behind the super-market, and will have its own staff of butchers and assistants.

Cheyenne Group To Build \$7,000 Locker Plant

CHEYENNE, Wyo.—Permit has been issued by the city engineer's office for construction of \$7,000, 40 x 60-ft., one-story building of white enameled brick and glass brick to house a 600-locker frozen food storage plant which will be owned and operated by A. A. Sanders, Lewis C. Thomas, Willis Walker, and Frank McCue under the name of Jack Frost Frozen Food Locker Co. Jacob Weber is contractor.

Alabama Locker Plant To Be Ready June 1

HUNTSVILLE, Ala.—A food freezing and processing plant being erected here for the Alabama Food Processing Co. is approaching completion and is expected to be ready for operation about June 1, in time to catch the early berry crop of this region. The plant will have approximately 500 lockers for rent.

Nathan Wertheimer Builds One-Story Plant

WISCONSIN RAPIDS, Wis.—A one-story locker plant measuring 42 by 90 feet is being erected here by Nathan Wertheimer.

"Masterpiece for Economy"

MASTERCRAFT ADJUSTABLE PAD AND CARRYING HARNESS

Efficient, sturdy and economical. Provides safer handling and thorough protection of refrigerators. Pad and harness are separate units and both adjustable to practically all styles and sizes of cabinets.

Adjustable Pad \$10.00 each
Adjustable Harness \$6.50 each
L.O.B. Chicago. Lettering on pad at only \$1.00 per order extra.

Write for latest folder and prices on pads for refrigerators, washers, ironers, ranges, radios, etc.

BEARSE MANUFACTURING COMPANY
INCORPORATED 1941
3815-3825 Cortland Street, Chicago, Illinois

In Next Week's Issue of the News

Only the News Brings You Electric Range Specifications

Another First For
"The Newspaper of the Industry"

Appliance Dealers!

18 Makes All Models

Next week, June 4, AIR CONDITIONING & REFRIGERATION NEWS will publish the first complete specifications of electric ranges. At least 18 makes, with all their models, will appear in a form which will allow easy comparison of their features. Listed by model number, under each make, such features will be described in detail as body construction, type and number of surface units, wattages, oven dimensions and insulation, warmers, utility drawers, and well cookers. In addition, editorial material, written especially for distributors and dealers handling electric ranges, will appear.

How You Can Use "Specs"

Show your customers factual proof of the comparative values of prominent electric ranges on the market today. The specifications as published by an independent organization will carry all the weight necessary to beat wild claims. This issue of the News will be valuable to dealers and salesmen all the year around. Next to knowing all about your product, complete information about the competition you must meet is perhaps most valuable.

Why These Facts Sell

Your willingness to stand on facts published by a concern not affiliated with any manufacturer or group is convincing proof of your sincerity and belief in your product. Your confidence will be a selling point.

Easy To Use

The Electric Range Specifications will appear as part of the regular issue of the NEWS, in a form convenient for your own study and for showing to prospects. Because of the

success of the annual Household Refrigerator Specifications, we are confident that almost every dealer will want many extra copies of the June 4 issue, for himself and salesmen. That's why we're printing several thousand more than the regular press run. Write now and order your extra copies.

Extra Copies At Low Cost, Order Today

Dealers and salesmen can use the Electric Range Specifications immediately, and they will also want a supply to lay away for the fall selling season. You can get 50 or more copies for only 10 cents apiece, 10 to 49 copies for 15 cents each, and less than 10 copies for 20 cents each. Send for yours now.



Air Conditioning & Refrigeration News

5229 Cass Ave.

Detroit, Mich.

Houston Sales Again Gain In March

HOUSTON, Tex.—Household electric refrigerator sales in the territory of Houston Light & Power Co. for March totaled 1,815 units, according to figures reported to the utility by appliance dealers in this area, which includes Galveston, Goose Creek, Rosenberg, Wharton, Freeport, Humble, and La Porte, as well as Houston itself.

Sales of 1,727 refrigerators were reported by dealers during March, 1940.

March sales of radios and washing machines also showed sizeable increases over figures reported for the same month last year, radio sales totaling 3,175 against 1,568, and washing machine sales reaching 897 as compared with 548.

A breakdown of appliance sales for 1941 and last year follows:

Appliance	Unit Sales March, 1941	Unit Sales March, 1940
Refrigerators	1,815	1,727
Washers	897	548
Radios	3,175	1,568
Attic Ventilators	78	238

FREE! 16 pages of practical information on Anaconda Copper Refrigeration Tubes



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices Waterbury, Conn.

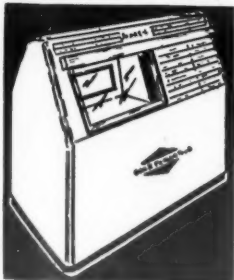
Condensing Units for every commercial refrigeration and air conditioning requirement . . . Also packaged air conditioners.



ESTABLISHED 1854

Curtis Refrigerating Machine Co.
Division of Curtis Manufacturing Co.
1912 Kienlen Ave., St. Louis, Mo.

CASH-IN with



QUICK FROZEN FOOD DISPLAYERS

Write for exclusive Distributor-Dealer proposition.

THE REOL COMPANY
Hearst Tower Bldg. Baltimore, Md.

3 CATALOGS IN 1

1. Hermetic Units Compressors—Parts
2. Parts—Compressors—Evaporators Frigidaire—Kelvinator—Norge General Electric and etc.
3. Complete Line Refrigeration Parts—Tools—Supplies

Write for Your Copy on Your Letterhead

SERVICE PARTS CO.
1101-03 N. 24th Ave. Melrose Park, Ill.



NEED HELP? We Furnish TRAINED MEN

Don't take a chance! Get the Right Man the First Time. U.E.I. trained men are available in your locality. They make better employees for all positions requiring mechanical ability or technical knowledge . . . because they know their work. We have the man you want. Phone, write or wire us. The service is prompt, confidential and FREE.

UTILITIES ENGINEERING INSTITUTE
Helden & Wayne Aves. (Est. 1927) Chicago, Illinois

What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields.

M-H Adds Two New Pneumatic Controls

MINNEAPOLIS—Two new additions to the line of pneumatic controls have just been announced by the Minneapolis-Honeywell Regulator Co.—the master and submaster insertion thermostats.

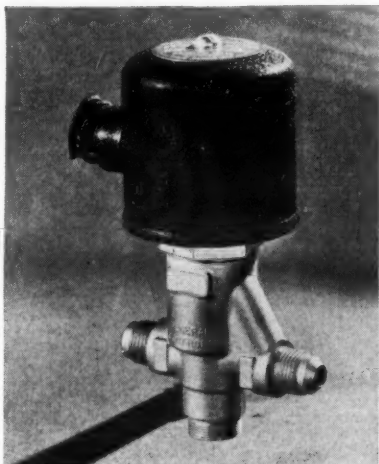
The submaster thermostat may be used to operate valves or dampers to control the temperature of air or liquids while the master thermostat, measuring the temperature of some other medium such as outdoor air, automatically resets the control point of the submaster thermostat as the outdoor temperature changes.

In a hot water heating system, for example, the submaster control, located in the hot water supply, may be set to raise the water temperature from 100° F. to 180° as the outdoor temperature, measured by the master controller, drops from 60° to 0° F.

General Controls Makes Solenoid For Small Jobs

GLENDAL, Calif.—Recommended for small applications, the new solenoid refrigerant valve, Series K-20-5, developed by General Controls Co. is said to be highly efficient in fractional tonnage installations where continued tight shut-off is necessary.

Although specifically designed for refrigerants such as sulphur dioxide, "Freon," and methyl chloride, the valve will also operate on air, water, gas, and light oil. Maximum capacity is 2.5 tons "Freon." It is avail-



able in only one port size— $\frac{5}{32}$ inch for standard $\frac{1}{2}$ inch I.P.S.

Special features claimed are low power consumption, quiet two-wire solenoid, freedom from a.c. hum, simplicity of design, and packless construction. Valve bodies are forged.

Coils are said to be resistant to moisture. Positive control is insured by a non-corrosive wear-resistant needle. Maximum operative fluid temperature is 240° F. Tube head is brazed and, it is claimed, will not leak even with a burned-out coil.

These valves are available with sweat or flare soldered connections in any desired combination.

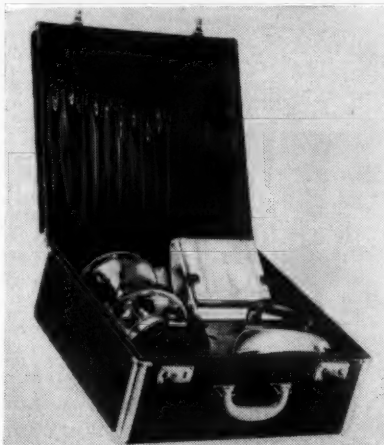
'Mycalex' Expected To Broaden Plastics Use

PITTSFIELD, Mass.—More intricate shapes and many new applications are expected by the plastics department of General Electric Co. from its development of injection molding of Mycalex, a material consisting of ground mica and a special glass.

Because of its insulation properties, the material is expected to find wide use in the radio and electronic field, and because of high mechanical strength, heat resistance, and dielectric value, in industrial control and heating industries.

Mycalex has been compression-molded for some years in plate and bar form and machined to required designs by G-E.

For The June Bride



This "Honeymoon Special" trousseau case packed with iron, toaster, and coffee-maker is a G-E special for May and June at \$29.50, complete.

Shock-Proof Bulb Marketed by Wabash

BROOKLYN—A new type of vibration-proof electric light bulb, constructed in such a way that the filament is protected from vibration or jarring, has been announced by Wabash Appliance Corp. for use in any commercial or industrial application where the life span of average bulbs is materially shortened due to any sort of vibration.

The new light is particularly recommended for use in places where motors or machinery in constant use set up high-frequency vibrations, in store windows or similar locations where lights are affected by the rumbling of passing trucks, or in hanging fixtures that might be frequently subjected to accidental jolts or rough usage.

Filament of the new bulb is cushioned against shock and concussion by four molybdenum pigtail springs welded to six flexible filament supports. The entire stem has been shortened and made flexible.

Other changes in construction make the new bulb burn cooler and brighter than the standard type, the company claims.

The new lamp will be made in 100, 150, and 200-watt sizes in five separate low voltages from 110 to 130 volts and in four separate high voltages from 220 to 250 volts. Standard finish will be either inside frosted or clear.

New Non-Sag Slide For Cabinet Drawers

ST. CHARLES, Ill.—Three-point roller bearing drawer slide, which is claimed to eliminate all sag, is now available as optional equipment at additional cost in kitchen cabinets, hospital, and other cabinets manufactured by St. Charles Mfg. Co. here.

The new slide has two roller bearings attached to drawer slide at the rear and one bearing on the case slide at the front. Whatever the position of the drawer, there are at least two roller contacts.



THE BUYER'S GUIDE

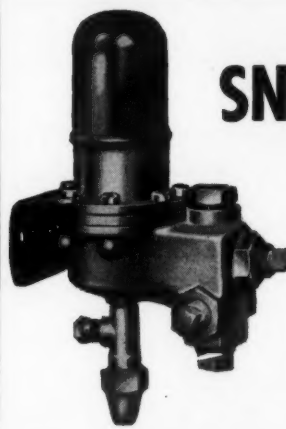


THE KOCH LINE IS Complete
Walk-In Coolers, Commercial Refrigerators and all types of Display Cases

Koch does not manufacture or sell condensing units. Koch distributors therefore furnish the units they sell.

Write Today for Information on PROFIT POSSIBILITIES

KOCH REFRIGERATORS
NORTH KANSAS CITY, MO.



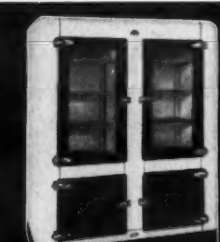
TWO TEMPERATURE SNAP-ACTION VALVE by Aminco

A marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of Aminco Two Temperature Valve.

Adjustable from 20" of vacuum to 63 pounds pressure. Differential 7 lbs. min. to 29 lbs. max. May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either. Free from bellows strain.

Send for Bulletin No. 17

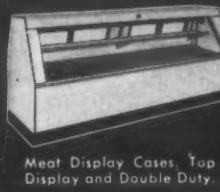
AMERICAN INJECTOR COMPANY
1481 Fourteenth Avenue DETROIT, MICHIGAN
Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles, Calif.
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.



Tyler Reach-In. Many sizes and door arrangements.



Refrigerated Vegetable Display, 6 or 9 ft. sizes.



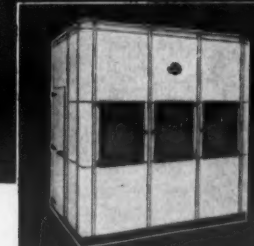
Meat Display Cases. Top Display and Double Duty.

CLIMB ABOARD FOR BIGGER PROFITS!



★ There's still time to tie up with Tyler—and really go places in '41. For this complete line is designed and built to fill every need—priced right. Buyers appreciate the extra value, too. Climb aboard now and get your share of profits! TYLER FIXTURE CORPORATION Dept. R-3, Niles, Michigan

TYLER DEALERS ARE MAKING MONEY!



Sectional Steel Clad Walk-In Coolers.



Tyler Dry Cold Beverage Cooler and Draw Cold Beer Dispenser.

RANCO TYPE O

The FIRST Commercial Control With All Working Parts Made of STAINLESS STEEL

Ranco Leads Again!

Anaconda Copper Refrigeration Tubes

No cracks or splits when flared against a block



THE AMERICAN BRASS CO.

FRENCH SMALL TUBE BRANCH
General Offices: Watertown, Conn.

Servicing Ice Cream Cabinets and Other Low Temperature Equipment

By Arch Black and Dean C. Seitz

Editor's Note: This is the first instalment of a new section in the series of articles by Arch Black and Dean C. Seitz which cover servicing of all types of low temperature refrigeration equipment in use in retail places of business.

"Ice cream cabinet servicing" is the subject of this new group of articles. Most of the material will be devoted to a tabulation of the complaints and specific remedies for service complaints for the three main types of ice cream cabinet refrigeration systems.

The purpose of the following series of articles on servicing mechanically refrigerated ice cream cabinets is two-fold: first, to outline the three refrigeration systems in common use by the major manufacturers of ice cream cabinets; second, to study the most common service complaints which will occur on these three systems, together with their symptoms, causes, and remedy.

These articles do not supplant the ice cream cabinet service manuals as issued by the manufacturers of these cabinets. However, the causes and remedies of service complaints common to all ice cream cabinet manufacturers using the same refrigeration system have never previously been correlated or summarized. This

in common use and will not be discussed in these articles.

The Low Side Float System

The low side float system was the first system used commercially in the manufacture of ice cream cabinets about 1923. Cabinets using this system are still manufactured and many of the original models are still in use.

Fig. 1 shows a schematic drawing of a complete low side float system. In this system the evaporator or boiler is mounted in a tank full of brine. The tank is insulated on all sides and when housed in a rigid framework becomes the ice cream cabinet. Into the tank of brine are inserted sleeves which are leakproof. These sleeves form the containers into which the cans of ice cream are inserted. A typical ice cream cabinet of this construction is shown in Fig. 2.

The condensing unit may be mounted in the same enclosure as the brine tank, in which case the installation is known as a self-contained or portable ice cream cabinet. If the condensing unit is located remotely from the ice cream cabinet, then the cabinet is known as a remote cabinet. In either case the operation of the system is the same.

In a portable or self-contained cabinet the connections between the evaporator and condensing unit are made at the factory. In remote ice cream cabinet installations these connections must of necessity be made by the installing engineer.

The cycle of operation of a low

side float system can be followed by reference to Fig. 1. The heat which leaks through the insulation of the ice cream cabinet, or which enters when the lids are open or which is carried in with the ice cream or ice cream can first passes into the air which is circulating within the ice cream cabinet. From the air the heat is carried to the walls of the ice cream sleeve and then to the evaporator by means of brine circulation.

The circulation referred to here is by natural convection or gravity since there is no forced circulation, either in the sleeve for the air or in the brine tank for the brine. As the evaporator picks up this heat from the brine, some of the liquid refrigerant in the evaporator vaporizes.

The pressure in the evaporator and the boiling point in the refrigerant.

(Concluded on Page 15, Column 2)

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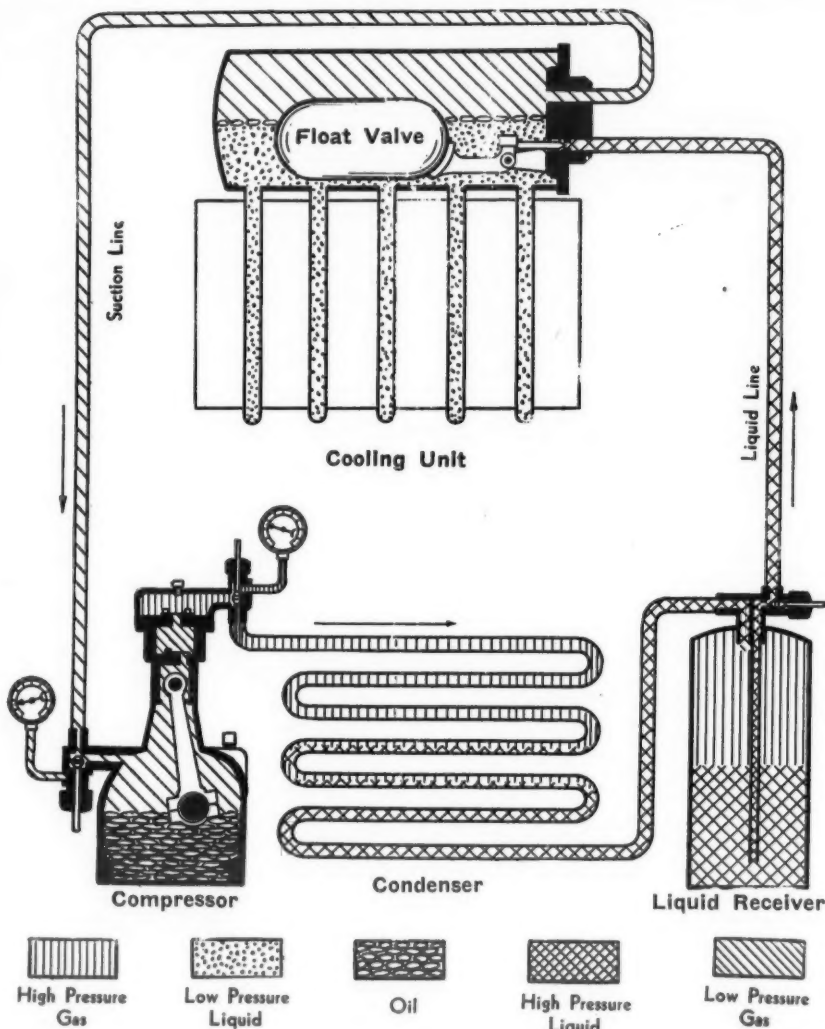
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Fig. 1 - - How Low Side Float System Operates



This schematic diagram shows chief features of the low side float system which was used on early ice cream cabinets. It is also used on cabinets made today.

series of articles will attempt that task.

It is to be expected that service complaints will arise occasionally which are not covered in this series of articles. Some of these unusual complaints will require considerable thought and study before the true nature of the difficulty has been discovered. A well grounded knowledge of the principles of refrigeration, together with the ingenuity of the service engineer will be put to test at that time.

Refrigeration Systems

There are three general types of refrigeration systems for ice cream cabinets in common use today. These three systems are:

1. The low side float.
2. The automatic expansion valve.
3. The high side float.

For the service engineer's general information it should be added that there is a fourth system of refrigerant control, the restrictor or capillary tube system, which is not

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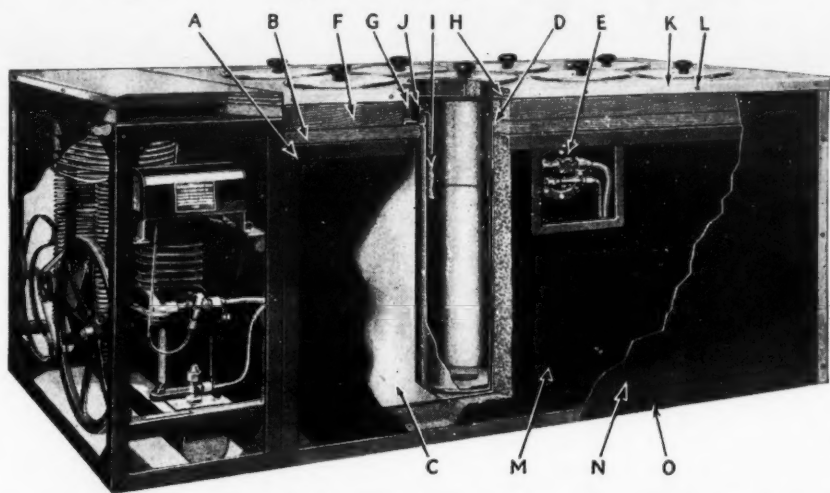
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Fig. 2 - Typical Ice Cream Cabinet



A typical ice cream cabinet is illustrated above. Principal parts of the cabinet itself are indicated by the letters, key to which follows: A, angle iron frame; B, wood frame (1 inch); C, copper tank; D, brine tank top; E, evaporator; F, wood frame; G, insulation; H, five-ply wood top; I, sleeve guard; J, rubber collar; K, bright metal top; L, wood screws; M, insulation; N, outside panels; O, machine screws.

What Controls Are Used On Low Side Float Cooling Systems

(Concluded from Page 14, Column 5)

erant will be reduced by the pumping action of the compressor. Boiling in the evaporator will take place vigorously when the condensing unit is running—that is, while the pressure in the evaporator is being reduced. During this period the heat laden vapor is being drawn into the compressor.

In the compressor this vapor is compressed and while compressed passes into the condenser where it is condensed to the liquid state and is again ready to return to the evaporator to absorb more heat.

The control which starts and stops the condensing unit, depending upon the requirements for refrigeration in the ice cream cabinet, may either be pressure actuated or temperature actuated.

Most ice cream cabinets using the low side float system with sulphur dioxide as the refrigerant use pressure controls. This type of control is perfectly satisfactory with sulphur dioxide due to the fact that the temperature pressure relationship of sulphur dioxide is not appreciably affected by the oil which is carried around the system with the refrigerant.

The oil which is lighter than the sulphur dioxide will float on top in the evaporator. It may be easily returned to the crankcase and since it does not appreciably affect the temperature pressure relationship a pressure control will satisfactorily maintain proper temperatures in the cabinet.

Low side float installations using "Freon-12" as the refrigerant usually use thermostatic control. The well for the bulb of the thermostat will be found on the front plate or header of the boiler. This well is not in contact with refrigerant, but rather in contact with the brine in which the evaporator is immersed.

For the sake of standardization most manufacturers today supply this well on all ice cream cabinet evaporators regardless of whether they are designed to use sulphur dioxide or "Freon-12."

Regardless of which refrigerant is used the well should be filled with oil to prevent moisture from condensing and freezing inside this well. An accumulation of moisture in the well could eventually cause bursting of the well with resultant brine leaks.

The major differences between evaporators of the low side float type as manufactured by the various major companies consist essentially of differences in appearance. Such differences as the size and shape of the float itself, the construction of the valve which opens and closes to allow liquid refrigerant to enter depending upon the level of refrigerant in the boiler, the shape, size, and number of tubes on the boiler. But basically the operation of all of them is exactly the same.

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LOS ANGELES—A new one-story brick factory building is being erected for the Super-Cold Corp. at 1016 E. 59th St. here, covering 117 x 249 feet and costing \$63,000.

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ST. LOUIS—Black vitrolite store front, sound-proofed ceiling and offices, and fluorescent lighting mark the newly modernized and enlarged quarters of C. E. Wildberger Co. at 1340 N. Kingshighway here.

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New Features Added To Norge Ranges

(Concluded from Page 1, Column 5)
Base is recessed for foot-room, and is finished in ebony enamel with chrome trim, and controls are white plastic with chromium inlay.

Features, in addition to the six-speed switches, include: circuit selector switch and clock for automatic timing; a choice of two types of cooking units—either Chromalox or T-K; large-capacity oven with speckled light gray enamel lining; dual oven elements; high-speed broiler unit with reflector plate; Mineral Wool oven insulation and extra-thick door.

The Norge six-speed switch affords accurate six-stage heat control and provides heat gradations for every cooking operation from simmering to speed-cooking.

Norge top cooking units, whether of the Chromalox or T-K type, are designed to deliver cooking heat efficiently to the bottom of the utensil and direct it into the food to be cooked rather than out into the room. For convenience, cooking units are spaced widely in order to eliminate crowding or interference when several cooking operations are being carried on simultaneously.

The Norge one-piece, steel "turret" top, including the entire top surface and the sloping backrail, is die-formed out of a single sheet of heavy-gauge metal. This adds to the strength of the stove, and improves the appearance of the top ensemble,

eliminating seams or crevices where grease or crumbs might lodge.

Big capacity, precise automatic heat control, improved visibility, and easy cleaning are features of the new Norge electric oven, which is 16 inches wide, 15½ inches high, and 20 inches deep—roomy enough to accommodate at one time four layers of a large cake, six loaves of bread, or a big turkey.

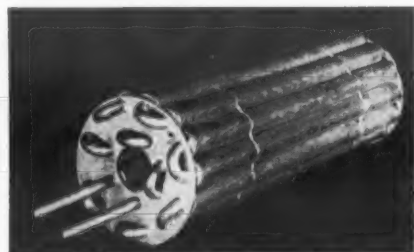
Glass oven door which permits checking progress of cooking without opening door, is available on models E-330 and E-350.

The high-speed "smokeless" type broiling unit at the top of the oven delivers fast, searing heat designed to seal in the natural juices of meats and minimize shrinkage. A reflector plate concentrates heat on the meat to be broiled.

Automatic time control makes it possible to place food on the stove, set the starting and stopping timer, and leave the house. Food will begin cooking at the selected time, and heat will be automatically switched off after the prescribed interval.

Available on models E-450 and E-500 is a circuit selector switch which provides triple automatic control by connecting the automatic time control to the oven, the thrift cooker, or the convenience outlet, into which may be plugged a toaster, coffee-maker, or any other appliance.

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Refrigerator Sales Pass Half Million Mark In April

(Concluded from Page 1, Column 5)
when shipments aggregated 363,000 units, a mark which this year's total passed by approximately 147,000.

While it is doubtless true that a good share of April's record-breaking total represents a continuation of the "buy now" policy on the part of distributors and dealers as insurance against possible future limitations, available field reports indicate that retail sales are moving at a pace only slightly under that of wholesale purchases, so that field stocks, while ample, apparently are not overly out of line, considering current circumstances.

World shipments by 12 member companies of National Electrical Manufacturers Association totaled 472,607 units during April, sending the four-month figure for Nema companies to 1,595,601 units. Shipments to distributors and dealers in the U. S. and possessions during the month amounted to 448,835 units, for a four-month figure of 1,525,496 units.

Canadian shipments totaled 8,898 during April and 23,356 for the four months, and foreign shipments 14,874 in April and 46,749 for the four months.

Shipments of 6-foot cabinets accounted for almost 70% of the month's total, with 357,899 units reported. Seven-foot units forged into second place for the month, with 41,126 units, while units in the 8-foot class were third, with 28,873 for the month.

For the four months, shipments of

Nema April Household Sales -- 472,341 Units

The following 12 companies reported sales to the Refrigeration Division of the National Electrical Manufacturers Association (Nema) on household electric refrigerators for April, 1941:
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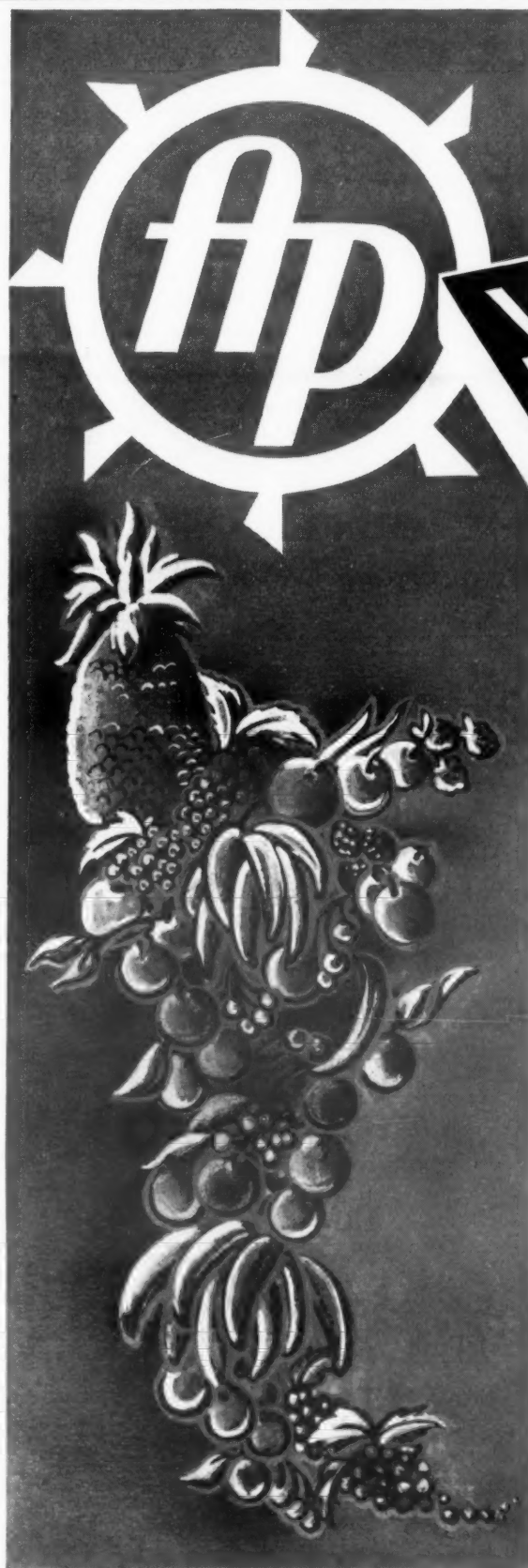
Co., Kelvinator Div. Nash-Kelvinator Corp., Leonard Div. Nash-Kelvinator Corp., Norge Div. Borg-Warner Corp., Stewart-Warner Corp., Sunbeam Electric Mfg. Co., and Westinghouse Electric & Mfg. Co.
The sales of the reporting companies include units manufactured for the following concerns: Montgomery Ward & Co., Potter Refrigeration Corp., and Sears, Roebuck & Co.

SALES FOR APRIL, 1941

	Domestic	Canadian	Other Foreign	Total World
Lacquer (Ext.) Cabinets Complete				
1. Less than 4 cu. ft.	1,882	66	821	2,769
2. 4 to 4.99 cu. ft.	16,138	1,621	2,670	20,429
3. 5 to 5.99 cu. ft.	5,785	725	43	6,553
4. 6 to 6.99 cu. ft.	321,247	6,250	8,149	335,646
5. 7 to 7.99 cu. ft.	38,563	...	789	39,352
6. 8 to 8.99 cu. ft.	26,605	137	978	27,720
7. 9 to 12.99 cu. ft.	9,583	99	240	9,922
8. 13 cu. ft. and up	31	...	7	38
9. Total Lacquer	419,834	8,898	13,697	442,429
Porcelain (Ext.) Cabinets Complete				
10. Less than 5 cu. ft.	...	...	...	...
11. 5 to 5.99 cu. ft.	85	...	...	85
12. 6 to 6.99 cu. ft.	21,783	...	470	22,253
13. 7 to 7.99 cu. ft.	1,687	...	87	1,774
14. 8 to 8.99 cu. ft.	1,081	...	72	1,153
15. 9 to 12.99 cu. ft.	3,623	...	260	3,883
16. 13 cu. ft. and up	742	...	22	764
17. Total Porcelain	29,001	...	911	29,912
18. Total—Lines 9 and 17	448,835	8,898	14,608	472,341
19. Separate Systems, ¼ Hp. or Less	...	...	266	266
20. Total Household Equipment	448,835	8,898	14,874	472,607
Value Index*	167.0	282.0	132.0	166.0

*Based on weighted sales for 1934, 1935, and 1936.

6-foot cabinets reached 1,223,408 "sevens," totals for the two being 119,819 and 113,369 units, respectively. higher in preference than the



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